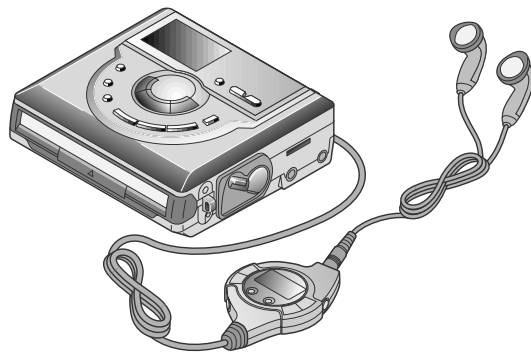


SHARP SERVICE MANUAL

No. SX891MDMS722U



(Illustration: MD-MS722/MS722C/MS722W)



(Illustration: MD-MS721W)



MD-MS722 MD-MS722C MD-MS722W MD-MS721W(BL) MD-MS721W(S)

• In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.

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SAFETY PRECAUTION FOR SERVICE MANUAL (MD-MS722W/MS721W ONLY)

Precaution to be taken when replacing and servicing the Laser Pickup.

The AEL (Accessible Emission Level) of Laser Power Output for this model is specified to be lower than Class I Requirements. However, the following precautions must be observed during servicing to protect your eyes against exposure to the laser beam.

- (1) When the cabinet has been removed, the power is turned on without a compact disc, and the Pickup is on a position other than the lead-in position, the Laser will light for several seconds to detect a disc. Do not look into the Pickup Lens.**
- (2) The Laser Power Output of the Pickup inside the unit and replacement service parts have already been adjusted prior to shipping.**
- (3) No adjustment to the Laser Power should be attempted when replacing or servicing the Pickup.**
- (4) Under no circumstances look directly into the Pickup Lens at any time.**
- (5) CAUTION - Use of controls or adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.**

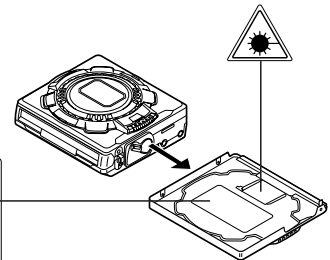
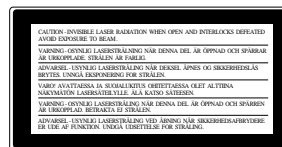
CAUTION

CLASS 1 LASER PRODUCT
APPAREIL À LASER DE CLASSE 1
PRODUCTO LASER DE CLASE 1

- This Portable MiniDisc Recorder is classified as a CLASS 1 LASER product.
- The CLASS 1 LASER PRODUCT label is located on the bottom.
- Use the portable minidisc recorder only in accordance with the instructions given in this manual and do not attempt to interfere with the interlock switch or make any other adjustment as this may result in exposure to hazardous radiation.

Laser Diode Properties

- Material: GaAlAs
- Wavelength: 785 nm
- Pulse time:
 - Read mode; 0.8 mW Continuous
 - Write mode; max. 10 mW 0.5S
 - min. cycle 1.5S
 - Repetition



(Illustration: MD-MS722W)

Precaution to be taken when replacing and servicing the laser pickup.

The following precautions must be observed during servicing to protect your eyes against exposure to the laser.

Warning of possible eye damage when repairing:

If the AC adaptor or batteries are connected when the top housing (disc cover) of the unit is removed, and the PLAY key is pressed, the laser will light up during docus access (2-3 seconds). (Fig. 2-1) During the operation, the laser will leak from the opening between the magnetic head and the mechanical chassis (Fig. 2-2). In order to protect your eyes, you must not look at the laser during repair. Before repairing be sure to disconnect the AC adaptor and remove the batteries.

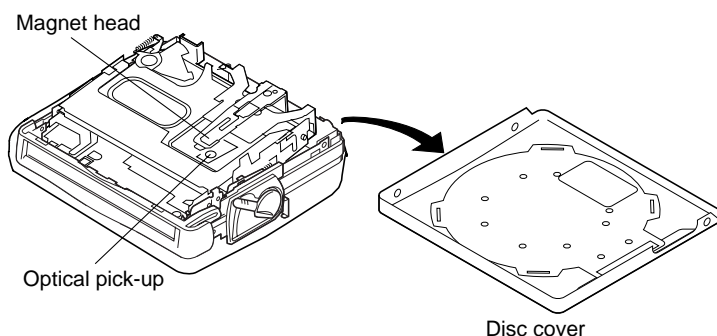


Figure 2-1

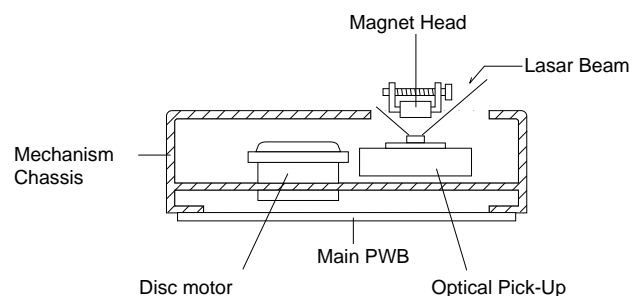


Figure 2-2

FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

SPECIFICATIONS

● General

Power source: (MS722/MS722C)

DC 3.6 V (rechargeable lithium-ion battery x 1)
DC 5 V (AC adaptor)
AC 120V, 60 Hz
DC 3.4V: Battery case
(commercially available, "AA" size, alkaline battery x 1)
DC 4.5V: Separately available car adaptor, AD-CA20X
(for cars with a 12-24V DC negative earth electrical system)

Power source: (MS722W/MS721W)

DC 3.6 V (rechargeable lithium-ion battery x 1)
DC 5 V (AC adaptor)
AC 110 - 240V, 50/60 Hz
DC 3.4V: Battery case
(commercially available, "AA" size, alkaline battery x 1)
DC 4.5V: Separately available car adaptor, AD-CA20X
(for cars with a 12-24V DC negative earth electrical system)

Power consumption: (MS722/MS722C)

7 W (AC adaptor)
0.15A (AC adaptor)

Power consumption: (MS722W/MS721W)

Output power:

RMS; 20 mW (10 mW + 10mW)
(0.2% T.H.D.)

Charging time:

Approx. 3 hours
(When using the AC adaptor included with the unit)

Battery life:

When using the rechargeable battery (fully charged) included with the unit	When using one, commercially available, high capacity, "AA" size, alkaline batteries (in the battery case)	When using one, commercially available, high capacity, "AA" size batteries with the rechargeable battery (fully charged)
Continuous recording: Approx. 8 hours	Continuous recording: Approx. 3 hours	Continuous recording: Approx. 11 hours
Continuous play: Approx. 10 hours	Continuous play: Approx. 6 hours	Continuous play: Approx. 16 hours

- The continuous recording time is for analogue input when the volume level is set to "VOL 0".
- The continuous play time shows the value when the volume level is set to "VOL 15".
- The above values are the standard values when the unit is charged and used at an ambient temperature of 20°C.
- The operating time when using alkaline batteries may be different, depending on the type and manufacturer of the batteries, and on the operating temperature.

Input sensitivity:

Recording level	Reference input level	Input impedance
MIC H	0.25 mV	10 k ohms
MIC L	2.5 mV	10 k ohms
LINE	100 mV	20 k ohms

Output level: (MS722/MS722C)

	Specified output	Maximum output level	Load impedance
Headphones	—	10 mW + 10 mW	16 ohms
LINE	300 mV (-12dB)	—	10 kohms

Output level: (MS722W/MS721W)

	Specified output	Maximum output level	Load impedance
Headphones	—	10 mW + 10 mW	32 ohms
LINE	300 mV (-12dB)	—	10 kohms

Dimensions:

Width: 3-7/16" (87.0 mm)
Height: 1-1/16" (26.7 mm)
Depth: 3-1/4" (81.5 mm)

Weight:

0.49 lbs. (220 g) with rechargeable battery

Input socket:

Line/optical digital, microphone
(powered by the main unit)

Output socket: (MS722/MS722C)

Headphones (impedance: 19 ohms)/
remote control unit

Output socket: (MS722W/MS721W)

Earphones (impedance: 32 ohms)/
remote control unit

● MiniDisc Recorder

Type:

Portable MiniDisc recorder

Signal readout:

Non-contact, 3-beam semi-conductor laser pick-up

Audio channels:

Stereo 2 channels/monaural (long-play mode) 1 channel

Frequency response:

20 - 20,000 Hz (± 3 dB)

Rotation speed:

Approx 400 - 900 rpm

Error correction:

ACIRC (Advanced Cross Interleave Reed-Solomon Code)

Coding:

ATRAC (Adaptive TRAnsform Acoustic Coding), 24-bit computed type

Recording method:

Magnetic modulation overwrite method

Sampling frequency:

44.1 kHz (32 kHz and 48 kHz signals are converted to 44.1 kHz, and then recorded.)

Wow and flutter:



Unmeasurable (less than $\pm 0.001\%$ W.peak)

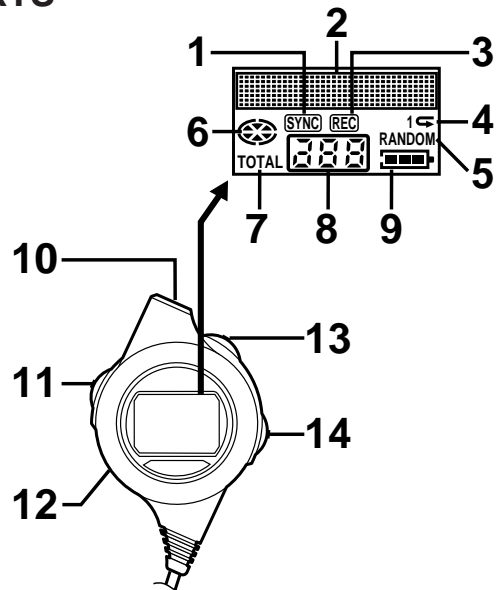
Specifications for this model are subject to change without prior notice

NAME OF PARTS






MD-MS722/MS722C/MS722W

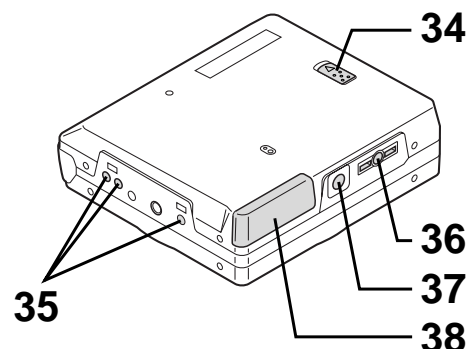
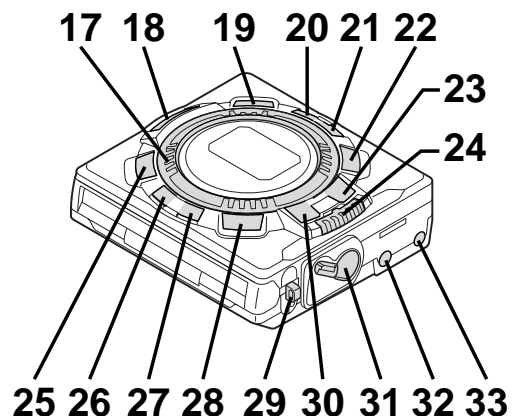
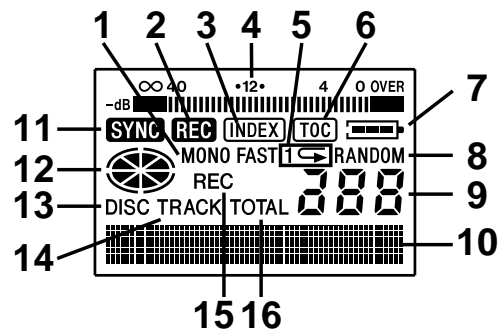
■ Remote control unit

1. Synchro Recording Indicator
2. Character/Time Information Indicator
3. Record Indicator
4. Repeat Indicator: 
5. Random Indicator
6. Disc Mode Indicator
7. Total Track Number Display
8. Track Number Indicator
9. Battery Indicator: 
10. Headphones Jack (MS722/MS722C)
10. Earphones Socket (MS722W)
11. Display/Volume Shuttle Switch
12. Hold Switch
13. Play/Pause/Fast Reverse/ Fast Forward Shuttle Switch
14. Stop/Power Off/Bass/Play Mode Shuttle Switch



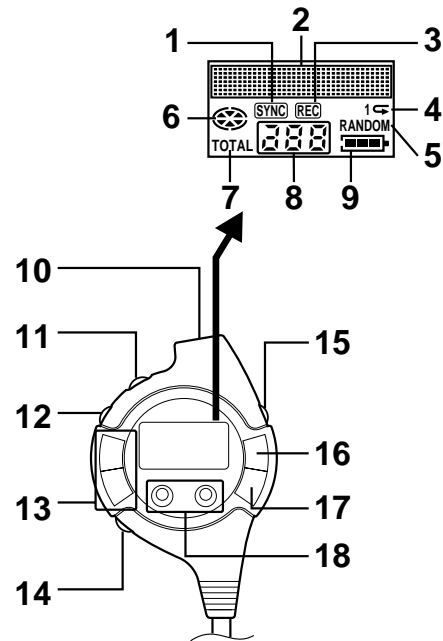
■ Main unit

1. Monaural Long-Play Mode Indicator
2. Record Indicator
3. Index Indicator
4. Level Meter
5. Repeat Indicator: 
6. TOC Indicator
7. Battery Indicator: 
8. Random Indicator
9. Track Number Indicator
10. Character/Time Information Indicator
11. Synchro Recording Indicator
12. Disc Mode Indicator
13. Disc Name Indicator
14. Track Name Indicator
15. Remaining Recording Time Indicator
16. Total Track Number Display
17. Jog Dial
18. Record/Track Mark Button
19. Volume/Name Select Buttons: -
20. Display/Lowercase Characters Button
21. Character Button
22. Volume/Name Select Buttons: +
23. Play/Pause Button: 
24. Fast Reverse/Fast Forward/Recording Level Control/ Cursor Shuttle Switch: 
25. Edit/Auto Mark/Time Mark Button
26. Mode/Insert Button
27. Bass/Delete Button
28. Enter/Fast Play/Synchro Button
29. Handstrap Attachment Eye
30. Stop/Power Off Button: :OFF
31. Eject Lever
32. Optical/Line Input Jack (MS722/MS722C)
32. Optical/Line Input Socket (MS722W)
33. Microphone Input Jack (MS722/MS722C)
33. Microphone Input Socket (MS722W)
34. Hold Switch
35. Battery Case Connection Terminals
36. Headphones Jack (MS722/MS722C)
36. Earphones Socket (MS722W)
37. 5V DC Input Jack (MS722/MS722C)
37. 5V DC Input Socket (MS722W)
38. Rechargeable Lithium-Ion Battery Compartment

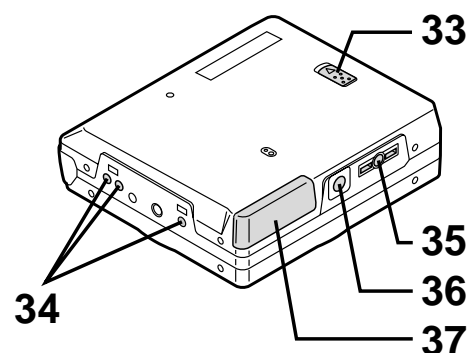
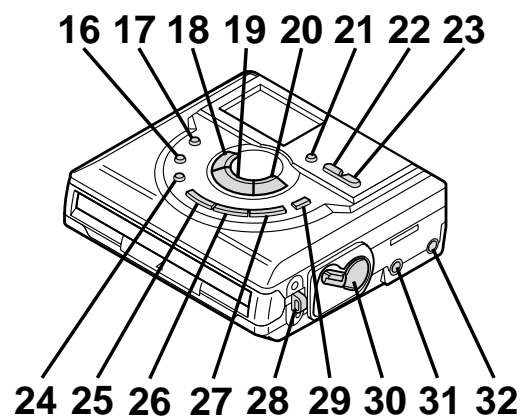
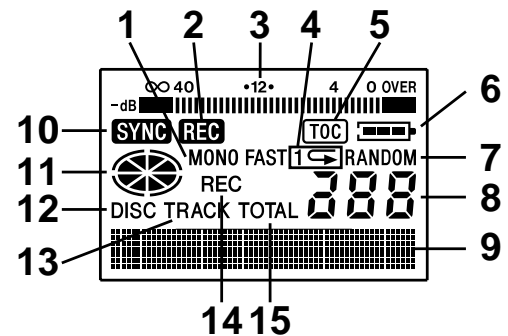


MD-MS721W**■ Remote control unit**

1. Synchro Recording Indicator
2. Character/Time Information Indicator
3. Record Indicator
4. Repeat Indicator:
5. Random Indicator
6. Disc Mode Indicator
7. Total Track Number Display
8. Track Number Indicator
9. Battery Indicator:
10. Earphones Socket
11. Hold Switch
12. Play Mode Button
13. Volume Buttons: +, -
14. Bass Button
15. Display Button
16. Play/Pause Button:
17. Stop/Power Off Button:
18. Fast Reverse/Fast Forward Buttons:

**■ Main unit**

1. Monaural Long-Play Mode Indicator
2. Record Indicator
3. Level Meter
4. Repeat Indicator:
5. TOC Indicator
6. Battery Indicator:
7. Random Indicator
8. Track Number Indicator
9. Character/Time Information Indicator
10. Synchro Recording Indicator
11. Disc Mode Indicator
12. Disc Name Indicator
13. Track Name Indicator
14. Remaining Recording Time Indicator
15. Total Track Number Display
16. Mode/Insert Button
17. Record/Track Mark Button
18. Fast Reverse/Recording Level Control/Cursor Button:
19. Play/Pause Button:
20. Fast Forward/Recording Level Control/Cursor Button:
21. Display/Lowercase Characters Button
22. Volume/Name Select Buttons: -
23. Volume/Name Select Buttons: +
24. Bass/Delete Button
25. Character Button
26. Enter/Fast Play/Synchro Button
27. Edit/Auto Mark/Time Mark Button
28. Handstrap Attachment Eye
29. Stop/Power Off Button: :OFF
30. Eject Lever
31. Optical/Line Input Socket
32. Microphone Input Socket
33. Hold Switch
34. Battery Case Connection Terminals
35. Earphones Socket
36. 5V DC Input Socket
37. Rechargeable Lithium-Ion Battery Compartment



POWER SOURCE

This unit can be used with 4 different power sources: a rechargeable battery, an AC adaptor, a battery case, and a separately available car adaptor (AD-CA20X).

■ Rechargeable battery power

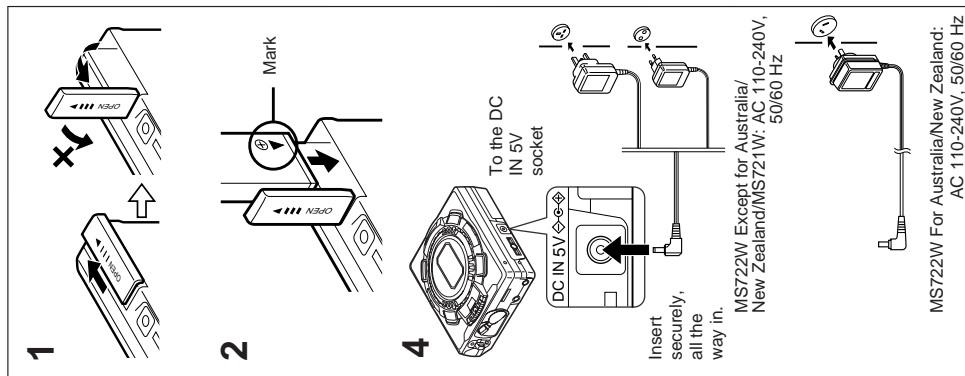
When the rechargeable battery is used for the first time or when you want to use it after a long period of disuse, be sure to charge it fully.

- 1 Open the rechargeable battery compartment cover.
- 2 Insert the rechargeable battery.
- Insert the side with the arrow first.

- 3 Close the rechargeable battery compartment cover.

- 4 Plug the AC adaptor into the AC socket, and then insert the plug on the AC adaptor lead into the DC IN 5V socket.

- About 4 seconds later, "■■■■" will flash, and the battery will begin charging.
- Battery charging will be complete in 3.0 hours. When the charging is complete, "■■■■" will go out.



Notes:

- After charging has been completed, the AC adaptor may be left connected. (For example, when charging at night)
- If the rechargeable battery is in the unit, it will be charged, even whilst operating the unit. (Float charge)

- Do not force open the rechargeable battery cover too wide.
- When the AC adaptor plug is inserted and a MiniDisc has already been inserted, playback may start automatically.
- In this case, press the ■ / OFF button twice to turn the power off.

(Illustration: MD-MS722W)

CONVENIENT OPERATION OF THE UNIT

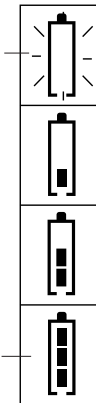
■ Checking the remaining amount of battery charge

The remaining amount of battery charge is shown by the battery indicator (■■■■) during operation.



< How to read the battery indicator >

When the battery is completely charged



When the battery needs charging, it is impossible to start recording or editing.

- When the battery is completely discharged, the whole battery indicator will flash. Recharge the battery or replace the alkaline battery with a new one.
- When the battery has run completely out, "BATT EMPTY" (main unit) and "Lo BATT" (remote control unit) will appear. Then, the power will be disconnected automatically.

Notes:

- When using the unit with an alkaline battery or a rechargeable battery, the battery indicator will not display correctly the remaining capacity for approximately 20 seconds after the power has been turned on.
- When the AC adaptor included with this unit or a separately available car adaptor is used, the battery indicator will not be shown.
- The number of bars shown in the battery indicator may increase or decrease, depending on the operation being performed. This is normal.
- When the rechargeable battery and the alkaline battery are used at the same time, the rechargeable battery is used first, and then the alkaline battery.
- Since the battery indicator shows the remaining amount of the particular battery being used, the number of bars will increase when the unit switches to the alkaline battery.

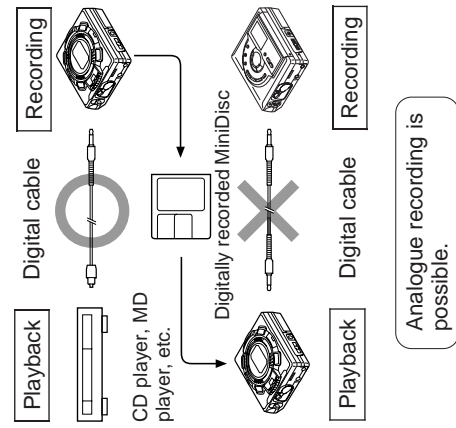
RECORDING USING THE OPTICAL DIGITAL CABLE

There are cases where digital recording may be impossible.

In the following cases digital recording is impossible, even if you are using digital cables.

When you attempt to make a new digital recording from a track that was digitally recorded on a MiniDisc

- MiniDiscs are designed so that only first generation digital copies can be made, further digital copies are prevented by the SCMS (Serial Copy Management System).



TROUBLESHOOTING

■ Moisture condensation

In the following cases, condensation may form inside the unit.

- Shortly after turning on a heater.
- When the unit is placed in a room where there is excessive steam or moisture.
- When the unit is moved from a cool place to a warm place.

When the unit has condensation inside, the disc signals cannot be read, and the unit may not function properly.

- If this happens, remove the disc. The condensation should evaporate in approximately 1 hour. The unit will then function properly.

Many potential "problems" can be resolved by the owner without calling a service technician. If something seems to be wrong with this product, check the following before calling your authorised SHARP dealer or service centre.

PROBLEM	CAUSE
The unit does not turn on.	<ul style="list-style-type: none"> ● Is the AC adaptor disconnected? ● Is the battery exhausted? ● Is the unit in the hold mode? ● Has condensation formed inside the unit? ● Is the unit being influenced by mechanical shock or by static electricity?
No sound is heard from the earphones.	<ul style="list-style-type: none"> ● Is the volume set too low? ● Is the remote control unit or the earphones plugged in? ● Are you trying to play a MiniDisc with data on it instead of a MiniDisc containing music?
When the operation buttons are pressed, the unit does not respond.	<ul style="list-style-type: none"> ● Is the unit in the hold mode? ● Is the battery exhausted? ● Is the remote control unit plug or the earphone plug inserted firmly?
Some sounds are skipped.	<ul style="list-style-type: none"> ● Is the battery exhausted? ● Is the unit being subjected to excessive vibration?
The MiniDisc cannot be ejected.	<ul style="list-style-type: none"> ● Has the track number or character information been written on the disc yet? ● Is the unit in the recording or editing mode?
Recording and editing are impossible.	<ul style="list-style-type: none"> ● Is the MiniDisc protected against accidental erasure? ● Is the unit connected properly to the other equipment? ● Is the AC adaptor unplugged or did a power failure occur whilst recording or editing? ● Is the unit in the hold mode? ● Is an optical signal being output from the external equipment? <p>Read the operation manual for the external equipment.</p>

■ If trouble occurs

When this product is subjected to strong external interference (mechanical shock, excessive static electricity, abnormal supply voltage due to lightning, etc.) or if it is operated incorrectly, it may malfunction. If such a problem occurs, do the following:

1. Unplug the AC adaptor from the AC socket.
2. Remove the battery.
3. Leave the unit completely unpowered for approximately 30 seconds.

MINIDISC SYSTEM LIMITATIONS

MiniDiscs are recorded using a different system than is used for cassette tapes or DAT recordings. Therefore, the following conditions may be encountered, depending on how the disc has been recorded or edited. These are due to system limitations, and should be considered normal.



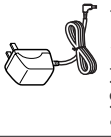
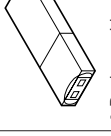
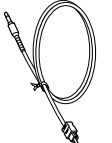
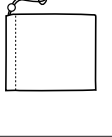
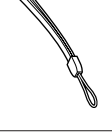
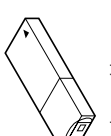
Even if the maximum recording time of a MiniDisc has not been reached, "DISC FULL" or "TOC FULL" may be displayed.	When the number of tracks used reaches the limit, regardless of the remaining recording time, further recording will be impossible. (Maximum number of tracks: 254) If a MiniDisc has been recorded or edited repeatedly or if a MiniDisc has scratches on it, it may not be possible to record the maximum number of tracks on it.
Even if the number of tracks and the recording time have not reached the limit, "DISC FULL" may be displayed.	If there are scratches on a disc, the unit will automatically avoid recording in those areas. The recording time will be reduced.
Even if several short tracks are erased, the remaining recording time may not show an increase.	When the remaining recording time of a disc is displayed, short tracks less than 12 seconds long may not be included in the total.
Two tracks may not be combined in editing.	For MiniDiscs on which repeated recording and editing operations were performed, the COMBINE function may not work.
The total of the recorded time and time remaining on a disc may not add up to the maximum possible recording time.	A cluster (about 2 seconds) is normally the minimum unit of recording. So, even if a track is less than 2 seconds long, it will use about 2 seconds of space on the disc. Therefore, the time actually available for recording may be less than the remaining time displayed. If there are scratches on discs, those sections will be automatically avoided (no recording will be placed in those sections). Therefore, the recording time will be reduced.
When recorded tracks are played back using the cue and review operations, some sounds may be skipped.	For MiniDiscs on which repeated recording and editing were performed, some sounds may be skipped whilst cueing and reviewing.
A track number can be created in the middle of a track.	If there are scratches or dust on a MiniDisc, the track numbers following that track will be increased by one.

ERROR MESSAGES

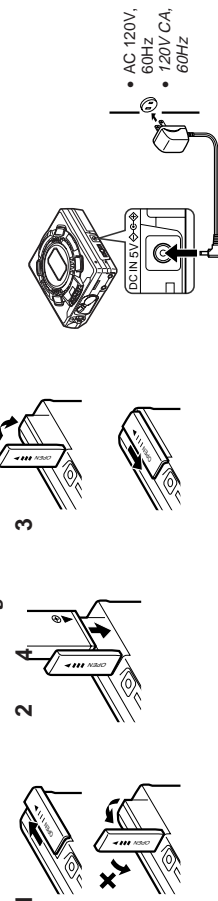
Error messages	Meaning	Remedy
BATT EMPTY (Lo BATT)	● The battery run down.	● Charge the rechargeable battery or replace the alkaline battery (or use the AC adaptor for power).
BLANK DISC (BLANK)	● Nothing is recorded.	● Replace the disc with a recorded disc.
Can't COPY (Not REC)	● No copy can be made because of the SCMS copyright system.	● Record using the analogue cable.
Can't EDIT	● A track cannot be edited.	● Change the stop position of the track and then try editing it.
Can't REC (Not REC)	● Recording cannot be performed correctly due to vibration or shock in the unit.	● Re-record or replace it with another recordable disc.
Can't WRITE	● Editing is impossible.	● Check the number of tracks.
DEFECT (DEFECT)	● The disc is scratched.	● If the sound you hear is not right, try recording again. ● Replace the disc with another recordable disc.
Din UNLOCK (UNLOCK)	● Poor connection of the digital cable.	● Connect the digital cable securely.
DISC ERROR (E-DISC)	● The disc is damaged.	● Reload the disc or replace it.
DISC FULL	● The disc is out of recording space.	● Replace it with another recordable disc.
HOLD (HOLD)	● The unit is in the hold mode.	● Return the HOLD switch to its original position.
LOCKED LOCK ERROR	● The EJECT lever was moved during recording or editing.	● Turn off the power and remove the MiniDisc.
NO DISC	● A disc has not been loaded.	● Load a disc.
PB DISC PROTECTED	● The disc is write protected. ● You tried to record on a playback-only disc.	● Move the write protection knob back to its original position. ● Replace it with a recordable disc.
POWER ?	● Improper power is being supplied.	● Use one of the specified power sources.
SORRY (SORRY)	● Since a track number is currently being located or written to, the unit cannot accept your command.	● Wait for a while and try the operation again.
SYSTEM ERR (E-SYS)	● You have come to the conclusion that the unit is out of order.	● To have it repaired, go to the distributor where you purchased the unit.
TEMP OVER (E-TEMP)	● The temperature is too high.	● Turn off the power, and wait for a while.
TOC ERROR (E-TOC)	● A large portion of the disc has been damaged.	● Replace it with another recorded disc.
TOC FULL	● There is no space left for recording character information (track names, disc names, etc.).	● Replace it with another recordable disc.
Tr. Protect	● The track has been protected from being erased.	● Edit the track with the device on which it was recorded.
U TOC ERROR (E-UTOC)	● A large portion of the disc has been damaged. ● There is an error in the recorded signal.	● Replace it with another recorded disc. ● Erase all of the signal errors, and then try recording again.
? DISC (?DISC)	● A disc which contains data other than music was played. ● There is an error in the signal from the disc.	● A disc which contains non-music data cannot be played. ● Replace it with another recorded disc.

() : Error messages seen on the remote control.

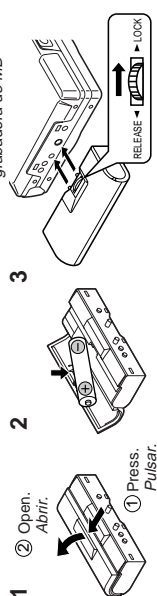
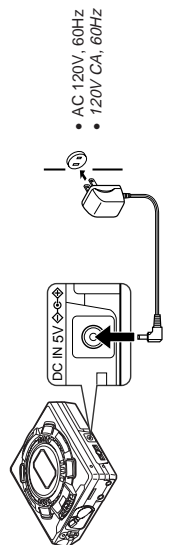
1 Check the supplied accessories / Compruebe los accesorios suministrados

 ● Remote Control Unit x 1 ● Controlador remoto x 1	 ● Headphones x 1 ● Auriculares x 1	 ● AC Adaptor x 1 ● Adaptador de CA x 1	 ● Battery Case x 1 ● Caja de la pila x 1
 ● Optical Digital Cable x 1 ● Cable óptico digital x 1	 ● Carrying Bag x 1 ● Bolsa para el transporte x 1	 ● Handstrap x 1 ● Correa para la muñeca x 1	 ● Rechargeable Lithium-Ion Battery x 1 ● Batería recargable de litio x 1

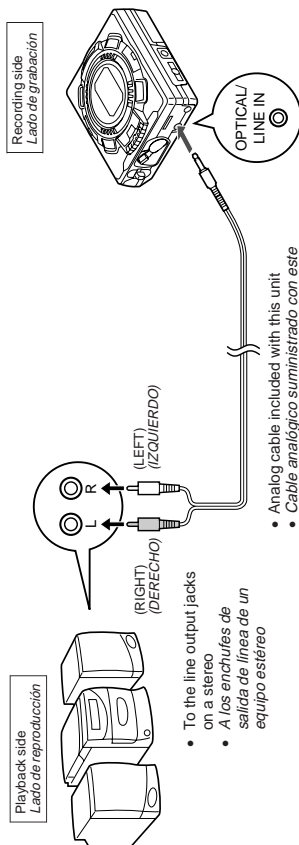
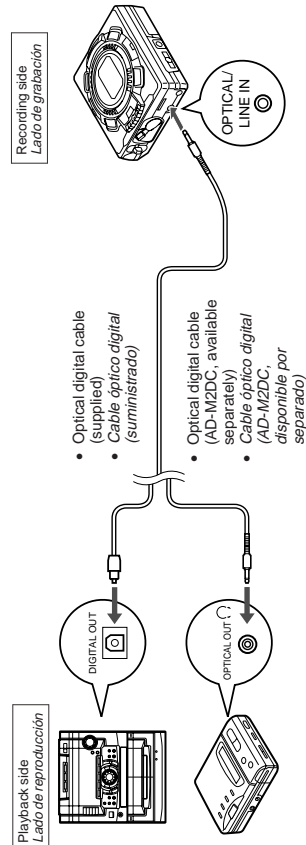
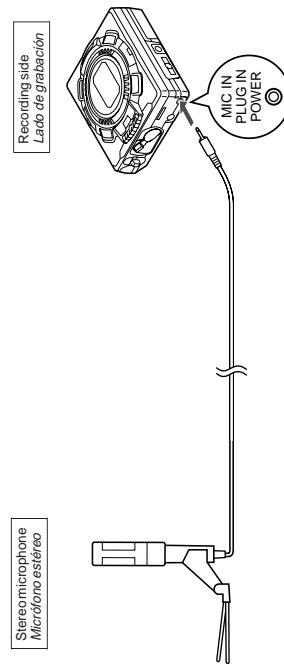
2 Power source / Alimentación

■ Rechargeable battery power
■ Alimentación de la batería recargable■ Alkaline battery power
■ Alimentación de la pila alcalina

- Make sure that a fully charged rechargeable battery is inserted.
- Do not use the unit if it only has an alkaline battery in it.
- Asegúrese de que se ha insertado una batería completamente cargada.
- No emplee el aparato si sólo tiene una pila alcalina instalada.

■ AC power
■ Alimentación de CA

3 Connection / Conexión

■ Analog recording
■ Grabación analógica■ Digital recording
■ Grabación digital■ Microphone
■ Micrófono

QUICK GUIDE (MD-MS722 ONLY)

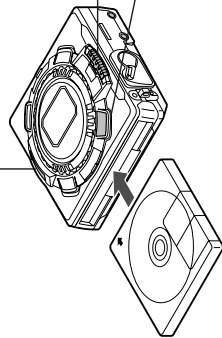
4 Recording / Grabación

■ Recording from CDs or MDs (Synchro recording)

■ Grabación de discos compactos o minidisks (Grabación sincronizada)

1 Connect the external equipment.
Conecte el equipo externo.

2 Insert a recordable MiniDisc.
Inserte un minidisco grabable.



3 Press the ● REC button.
Pulse el botón ● REC.

4 While playing sound from the external equipment connected to this unit, move the shuttle switch up or down to adjust the recording level.



Mientras se reproduce el sonido del equipo externo conectado a este aparato, mueva el selector de mando de lanzadera hacia arriba o abajo para ajustar el nivel de grabación.

5 Press the ENTER/SYNC button.
Pulse el botón ENTER/SYNC.

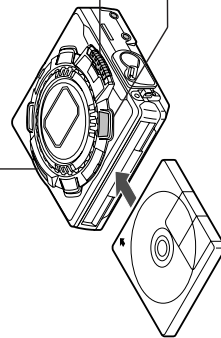
6 Begin playback on the source equipment.
Inicie la reproducción en el equipo fuente.

■ Recording from the microphone (Mic synchro recording)

■ Grabación de un micrófono (Grabación sincronizada con micrófono)

1 Connect the stereo microphone to the MIC IN jack.
Conecte el micrófono estéreo al enchufe MIC IN del aparato principal.

2 Insert a recordable MiniDisc.
Inserte un minidisco grabable.



3 Press the ● REC button.
Pulse el botón ● REC.

4 Move the shuttle switch up or down to adjust the recording level.
Mueva el selector de mando de lanzadera hacia arriba o abajo para ajustar el nivel de grabación.



5 Press the ENTER/SYNC button to select the synchro recording level. (This level can be changed, even while recording.)
Pulse el botón ENTER/SYNC para seleccionar el nivel de la grabación sincronizada. (Este nivel podrá cambiarse incluso durante la grabación.)



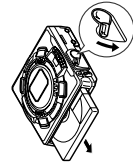
6 When a noise, such as a person speaking, is picked up by the microphone, recording will begin automatically.
Cuando el micrófono capte un ruido, el de una persona que hable por ejemplo, la grabación empezará automáticamente.

To stop recording:
Para detener la grabación:

Press the ■/OFF button.
Pulse el botón ■/OFF.

After recording:
Después de la grabación:

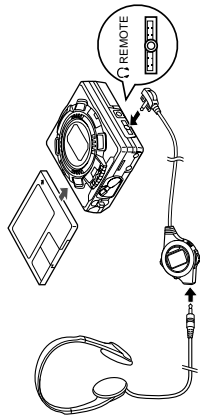
Press the ■/OFF button while in the stop mode.
Pulse el botón ■/OFF estando en el modo de parada.



To remove the MiniDisc:
Para extraer el minidisco:

Turn off the power and move the EJECT lever in the direction indicated by the arrow.
Desconecte la alimentación y mueva la palanca EJECT en el sentido indicado por la flecha.

5 Playing a MiniDisc / Reproducción de un minidisco



Playback does not start when a MiniDisc is inserted:
La reproducción no empieza cuando se inserta un minidisco:

- Press the ►/II button.
In the following cases, the auto-play function will not work.
- When the recordable MiniDisc write protection tab is closed
- When the auto-play function has been canceled
- Pulse el botón ►/II.
- En los casos siguientes, la función de reproducción automática no se activará.
- Cuando esté cerrada la lengüeta de protección contra escritura del minidisco grabable
- Cuando haya sido cancelada la función de reproducción automática

To interrupt playback:
Para interrumpir la reproducción:

- Press the ►/II button during playback.
- To resume playback, press the ►/II button again.
- Pulse el botón ►/II durante la reproducción.
- Para reanudar la reproducción, pulse de nuevo el botón ►/II.

To stop playback:
Para detener la reproducción:

- Press the ■/OFF button.
- Pulse el botón ■/OFF.

To turn off the power:
Para desconectar la alimentación:

- Press the ■/OFF button while in the stop mode.
- Pulse el botón ■/OFF estando en el modo de parada.

6 Sound control / Control del sonido

Adjust the volume.

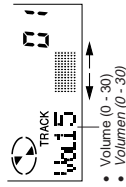
From the main unit:
Press the + button to increase the volume and the – button to decrease the volume.

From the remote control unit:
Move the shuttle switch up once to increase the volume, and move it down once to decrease the volume.

Ajuste el volumen.

Desde el aparato principal:
Pulse el botón + para aumentar el volumen y el botón – para reducirlo.

Desde el controlador remoto:
Mueva el selector de mando de lanzadera una vez hacia arriba para aumentar el volumen, y muévelo hacia abajo para reducirlo.



Adjust the bass level.
Each time the BASS button is pressed, the tone will be switched as follows:

Ajuste el nivel de los graves.

Cada vez que pulse el botón BASS, el tono cambiará de la forma siguiente:



- BASS 1 — Bass sounds are emphasized slightly.
- BASS 2 — Bass sounds are emphasized more.
- BASS 3 — Bass sounds are emphasized even more.
- BASS OFF — Bass emphasis is canceled.
- BASS 1 — Los sonidos graves se realzan ligeramente.
- BASS 2 — Los sonidos graves se realzan más.
- BASS 3 — Los sonidos graves se realzan aún más.
- BASS OFF — El realce de los graves se cancela.

DISASSEMBLY

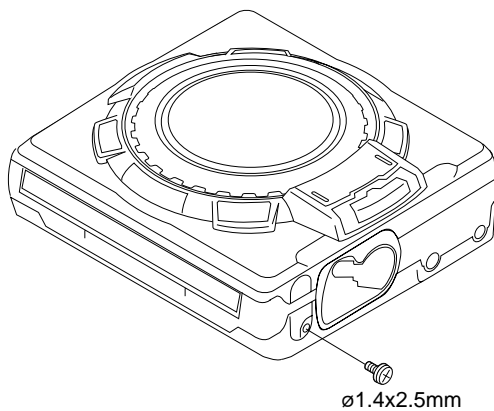
Cares before disassembling

When assembling the machine after disassembling or repair, observe the following requirements so as to ensure safety and performance.

1. Remove the batteries from the machine, and take out the mini-disc.
2. When assembling after repair, be sure to restore the initial location of wires.
Since the screws are small, incorrect fixing may result in malfunction.
3. When repairing, pay utmost attention to static electricity of ICs.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Bottom Cabinet	1. Battery Cover (A1) x1 2. Screw (A2) x6	11-1
2	Top Cabinet	1. Screw (B1) x3 2. Flexible PWB (B2) x2	11-1 11-2
3	Main PWB	1. Screw (C1) x2 2. Flexible PWB (C2) x2 3. Soldering (C3) x4	11-2
4	Mechanism Unit	1. Raise the rear part, and remove in the arrow direction.	11-3

(Illustration: MD-MS722)



Cares when servicing:

Be sure to use the screw with washer (Part code: LX-BZ0822AFFC, Distribution code: 124 970 0187). If a screw of different length is used by mistake, MD ejection may be disabled.

Figure 11-4

INSTALLING THE TOP CABINET

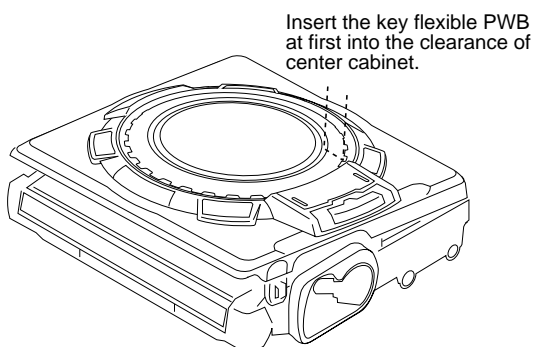


Figure 11-5

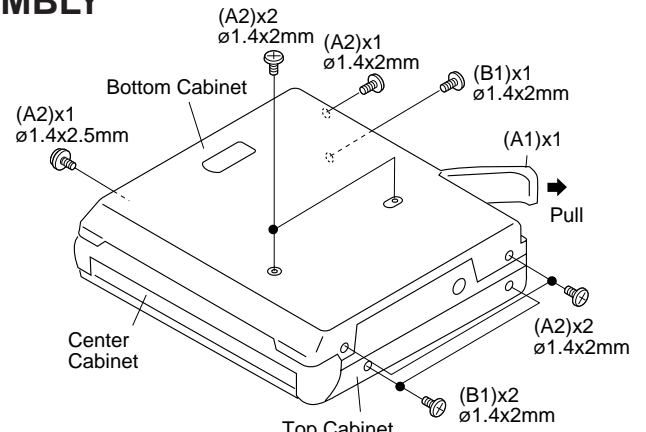
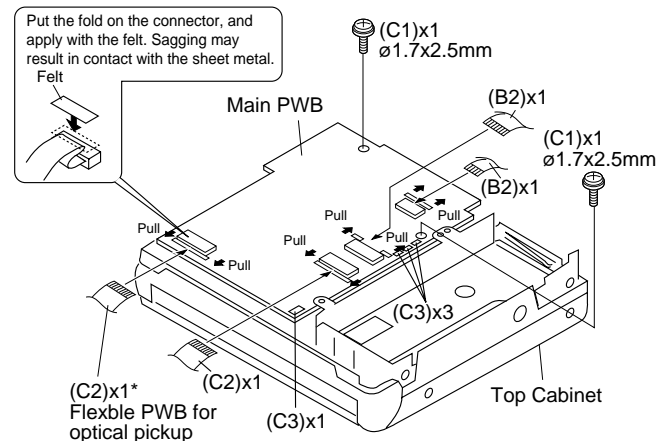


Figure 11-1



Caution:

Carefully handle the main PWB and flexible PWB. After removing the flexible PWB (*1) for the optical pickup from the connector, do not touch directly the front end of flexible PWB with your hand so as to prevent damage of optical pickup by static electricity.

Figure 11-2

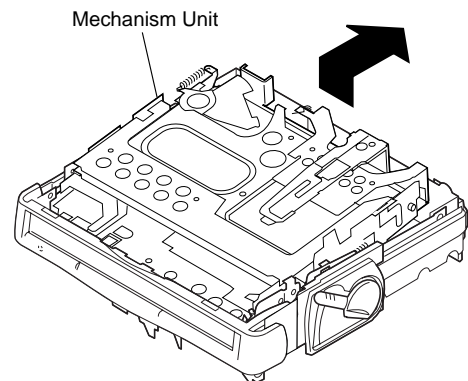


Figure 11-3

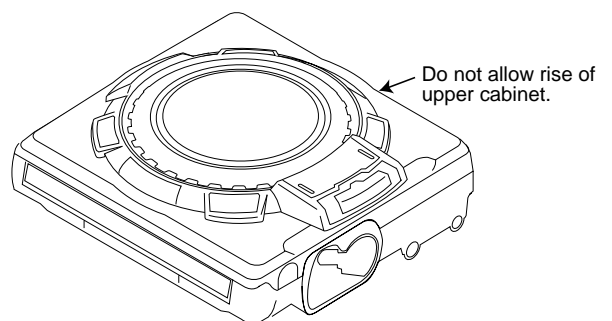


Figure 11-6

REMOVING AND REINSTALLING THE MAIN PARTS

Remove the mechanism according to the disassembling methods 1 to 3. (See Page 11.)

How to remove the spindle motor (See Fig. 12-1.)

1. Remove the solder joint (A1) x 1 of flexible PWB.
2. Remove the screws (A2) x 3 pcs., and remove the spindle motor.

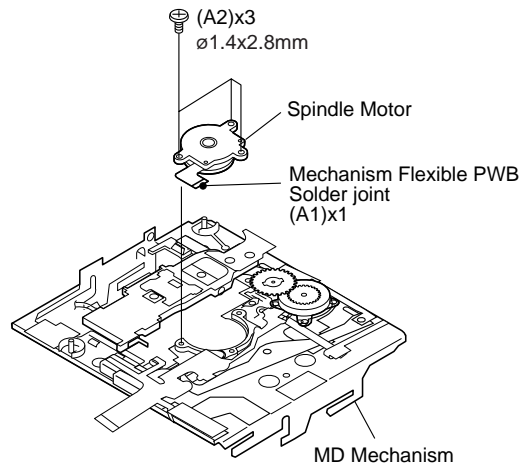


Figure 12-1

How to remove the lift motor (See Fig. 12-2.)

1. Remove the solder joint (B1) x 2 of slide motor lead wire.
2. Remove the screw (B2) x 1 pc., and remove the flexible PWB.
3. Remove the screw (B3) x 1 pc., and remove the lift motor.

Note:

Take care so that the motor gear is not damaged.
(If the gear is damaged, noise is caused.)

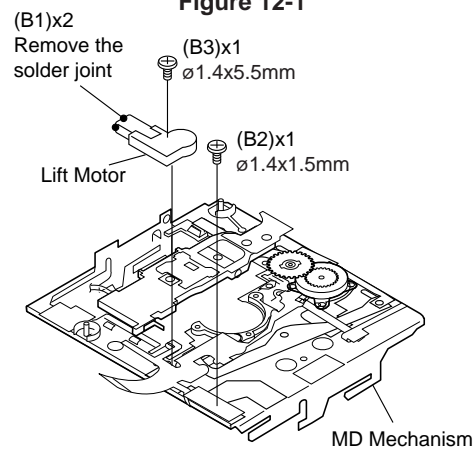


Figure 12-2

How to remove the sled motor (See Fig. 12-3.)

1. Remove the stop washer (C1) x 1 pc., and remove the drive gear (C2) x 1 pc.
2. Remove the solder joint (C3) x 1 of flexible PWB.
3. Remove the screws (C4) x 2 pc., and remove the sled motor.

Note:

Take care so that the motor gear is not damaged.

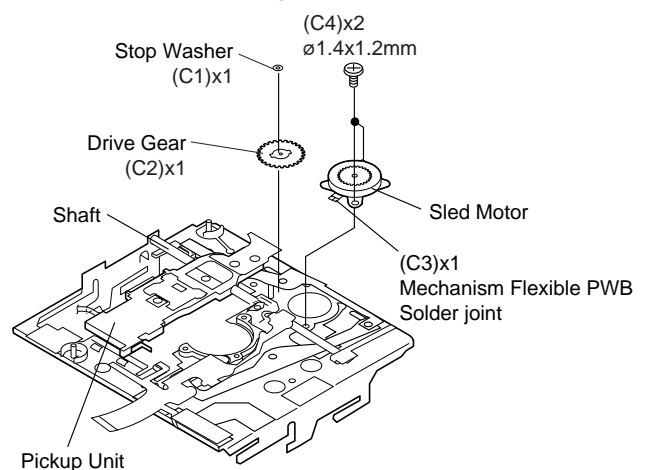


Figure 12-3

How to remove the magnetic head (See Fig. 12-4.)

1. Remove the screw (D1) x 1 which connects the magnetic head to the head relay flexible PWB, and remove the soldering joint (D2) x 2.

Note:

Mount carefully so as not to damage the magnetic head.
(If the gear is damaged, noise is caused.)

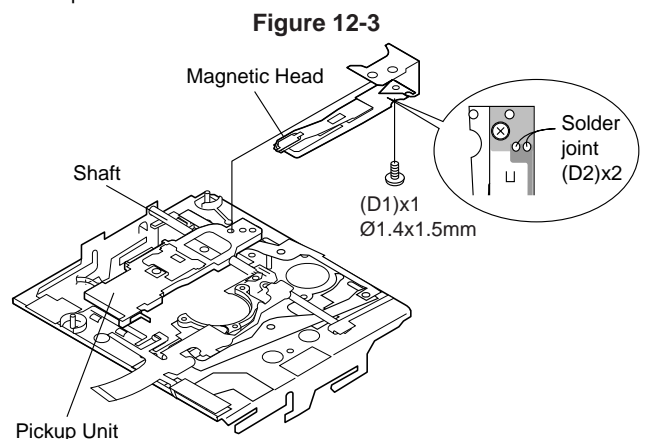


Figure 12-4

How to reinstall the optical pickup unit (See Fig. 12-5.)

1. Remove the screw (E1) x 1 pc.
2. Slowly raise the optical pickup.

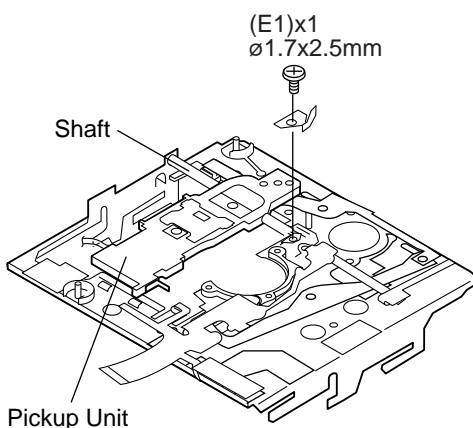


Figure 12-5

ADJUSTMENT

● Test disc

MD adjustment needs two types of disc, namely recording disc (low reflection disc) and playback-only disc (high reflection disc).

	Type	Test disc	Parts No.
1	High reflection disc	MMD-110 (TEAC Test MD)	88GMMD-110
2	Lowreflection disc	MMD-212 (TEAC Test MD)	88GMMD-212
3	Low reflection disc	Recording minidisc	UDSKM0001AFZZ

Note: Use the low reflection disc on which music has been recorded.

● Entering the TEST mode

1. Setting at port (in standby state, disc-free state or power nonconnected state)

(1) Set the port as follows.

TEST1 : "Low"

TEST0 : "High"

(2) Press the PLAY button in the standby state (it is allowed to insert the disc or to connect the power supply).

(3) Test Mode STOP [_ T E S T _]

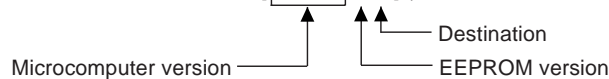
2. Setting by special button operation (in standby state)

(1) Holding down the DISP button and ENTER button, press the PLAY button.

(2) Normal mode setting initialization (BASS setting, VOL setting, etc.)

(3) Indication of microcomputer version for one second [7 0 2 A f X] (Only Serial No. 811XXXXX)

[9 0 8 A f X] (From Serial No. 812XXXXX)



(4) Whole LCD lighting for 2 seconds

(5) Test Mode STOP [_ T E S T _]

*When the PLAY button is pressed during indication (3) and (4), the process proceeds to (5).

● Leaving the TEST mode

(1) Press the STOP button in the TEST mode stop state or version indicating state or whole LCD lighting state.

(2) EEPROM rewrite-enable area updating, adjustment error setting (so as to adjust all the items when the power supply is turned on in the normal mode)

(3) Change to standby state

● Shipping setting method

Holding down simultaneously the VOLUME-DOWN key and PLAY key of the set unit without disc, supply the power from the DC IN plug. After the indication "INIT" -> "BYE OK" disappears, release the power supply of DC IN.

● Test Mode

1. AUTO 1 Mode	<ul style="list-style-type: none"> Perform preliminary automatic adjustment. If the combination of mechanism and pickup PWB has been changed, be sure to start from AUTO1. 	8. TEST-REC Mode	<ul style="list-style-type: none"> Continuous record from the specified address is performed. Change of record laser output(servo gain is also changed according to laser output). The temperature correction is performed only when servo start is performed, but the posture correction is not performed during continuous recording.
2. AUTO 2 Mode	<ul style="list-style-type: none"> Perform ATT (attenuator) automatic adjustment. Perform continuous playback (error rate display, jump test) 	9. NORMAL Mode	<ul style="list-style-type: none"> The mode is changed from the TEST mode to the normal mode without adjustment. In the normal mode the internal operation mode, memory capacity, etc. are indicated. In the normal mode both temperature correction and posture correction are performed.
3. MANUAL 1 Mode	<ul style="list-style-type: none"> Temperature is displayed. (Updating in real time) Seeing the displayed adjustment value, perform preliminary manual adjustment. (Error rate indication, jump test) 	10. DIGITAL INPUT Mode	<ul style="list-style-type: none"> Digital input information is displayed.
4. MANUAL 2 Mode	<ul style="list-style-type: none"> Temperature is displayed. (Updating in real time) Seeing the displayed adjustment value perform manually the preliminary adjustment. (Error rate indication, jump test) Continuous playback is performed (error rate display, jump test). 	11. ERROR INFORMATION Mode	<ul style="list-style-type: none"> Error information is displayed. Error information is initialized
5. RESULT 1 Mode	<ul style="list-style-type: none"> The value adjusted in AUTO1 or MANUAL1 is indicated. (Execution in servo "OFF" state"). 	12. EE-PROM Mode	<ul style="list-style-type: none"> Factors of digital servo are changed manually. (Each servo is turned on individually.) Cut-off frequency of BASS1, BASS2 and BASS3 is selected manually. Temperature detection terminal voltage is measured, and the reference value is set. Defaults are selected and set. Setting of EEPROM protect area is updated. (In case of protect releasing)
6. RESULT 2 Mode	<ul style="list-style-type: none"> The value adjusted in AUTO 2 or MANUAL 2 is indicated. Adjustment value is changed manually. (error rate display, jump test). 	13. INNER Mode	<ul style="list-style-type: none"> Determine the position where the INNER switch is turned on. (only high reflection disc). The temperature correction is performed only when servo start is performed, but the posture correction is not performed.
7. TEST-PLAY Mode	<ul style="list-style-type: none"> Continuous playback from the specified address is performed. 1 line, 10 lines or 400 lines manual jump is performed. C1 error rate display (pit section), ADIP error rate display (groove section) The temperature correction is performed only when servo start is performed, but the posture correction is not performed during continuous playback. 		

MD-MS722/C/W/MS721W

● Operation in each TEST mode

1. AUTO1 Mode

- When the STOP button is pressed while the AUTO1 menu appears or during automatic adjustment, the mode changes to the TEST mode stop state. At this time the adjustment value is not output.
- Be sure to adjust, using the specified disc MMD-212.
At this time release the EEPROM (IC402) protection. (Refer to EEPROM write procedure.)
- Adjustment NG; Adjustment item out of range, focus ON failure, and adjustment error
- When the PLAY button is pressed while ADJ. OK is displayed, AUTO2 is executed.

2. AUTO2 Mode

- When the STOP button is pressed while the AUTO2 menu appears or during automatic adjustment, the mode changes to the TEST mode stop state. At this time the adjustment value is not output.
- Adjustment NG; Adjustment item out of range, and adjustment error.

3. MANUAL1 Mode

- Adjustment item to be made in AUTO1 mode is performed manually.
- When the VOL UP button is pressed during adjustment, the setting increases, and the new setting is output.
- If the VOL DOWN button is pressed during adjustment, the setting decreases and the new setting is output.
- If the VOLUP/DOWN button is held down, the setting changes continuously with 100 ms cycle.
- If the setting is within the allowable range, the RANDOM display lights.
- When the STOP button is pressed during MANUAL1 MENU or measurement or adjustment, the state is changed to the TEST mode stop state.

4. MANUAL2 Mode

- Adjustment item to be made in AUTO2 mode is performed manually.
- When the VOL UP button is pressed during adjustment, the setting increases, and the new setting is output.
- If the VOL DOWN button is pressed during adjustment, the setting decreases and the new setting is output.
- If the VOLUP/DOWN button is held down, the setting changes continuously with 100 ms cycle.
- If the setting is within the allowable range, the RANDOM display lights.
- When the STOP button is pressed during MANUAL2 MENU or measurement or adjustment, the state is changed to the TEST mode stop state.
- When the PLAY button is pressed in B-ATT set state, the mode is changed to the continuous playback mode.
- As for operation during continuous playback refer to "TEST-PLAY mode explanation".

5. RESULT1 Mode

- The measurement value and set value of adjustment items for AUTO1 and MANUAL 1 are displayed.
- If the VOL UP button is pressed during setting indication, the setting increases. If the VOL DOWN button is pressed, the setting reduces. And then the new setting is stored in the RAM.
- When the VOL UP/DOWN button is held down, the setting changes continuously, one cycle being 100 ms.
- If the STOP button is pressed during RESULT1 menu or measurement value indication or set value indication, the state is changed to the TEST mode STOOP state.

6. RESULT2 Mode

- The measurement value and set value of adjustment items for AUTO2 and MANUAL 2 are displayed.
- If the VOL UP button is pressed during setting indication, the setting increases. If the VOL DOWN button is pressed, the setting reduces. And then the new setting is stored in the RAM.
- When the VOL UP/DOWN button is held down, the setting changes continuously, one cycle being 100 ms.
- If the STOP button is pressed during RESULT2 menu or measurement value indication or set value indication, the state is changed to the TEST mode STOOP state.

7. TEST-PLAY Mode

- When the STOP button is pressed while the TEST-PLAY menu appears, or in TEST-PLAY or continuous playback mode, the mode changes to the TEST mode stop state.
- When the PLAY button is pressed while the TEST-PLAY menu appears, continuous playback is initiated from the current pickup position.
- Whenever the DISP button is pressed in the TEST-PLAY mode, the address changes as follows.
0050 — 03C0 — 0700 — 08A0 — 0050 —
- Whenever the BASS key is pressed in the TEST-PLAY mode, the digit which is changed by the SKIP UP/DOWN button changes as follows.
0050 — 0050 — 0050 — 0050 — 0050 —
- When the SKIP UP button is pressed in the TEST-PLAY mode, the digit of address specified by the BASS button is set to +1h. (0 to F)
- When the SKIP DOWN button is pressed in the TEST-PLAY mode, the digit of address specified by the BASS button is set to -1h. (0 to F)
* When the SKIP UP/DOWN button is held down, the setting changes continuously, one cycle being 100 ms.
- When the BASS button is pressed in the continuous playback mode, the number of jump lines changes as follows.
1 — 10 — 384 — 1
* After the number of jump lines is indicated for one second, the address indication is restored. [▲▲▲ T R _]
- When the SKIP UP button is pressed in the continuous playback mode, the specified number of lines is jumped in the FWD direction.
- When the SKIP DOWN button is pressed in the continuous playback mode, the specified number of lines is jumped in the REV direction.
* When the SKIP UP/DOWN button is held down, jump is repeated every approx. 100 ms.

- Whenever the DISP button is pressed in the continuous playback mode, the indication changes as follows.

* Pit section	
Continuous playback (SUBQ address indication)	[S Q □□□□]
Continuous playback (C1 error indication)	[C E ☆☆☆☆]
Continuous playback (SUBQ address indication)	[S Q □□□□]
* Groove section	
Continuous playback (ADIP address indication)	[A P □□□□]
Continuous playback (C1 error indication)	[C E ☆☆☆☆]
Continuous playback (ADIP error indication)	[A E ★★★★★]
Continuous playback (ADIP address indication)	[A P □□□□]

8. TEST-REC Mode

- When the STOP button is pressed while the TEST-REC menu appears, or in the TEST-REC mode or continuous record mode, the mode changes to the TEST mode stop state.
- When the PLAY button is pressed while the TEST-REC menu appears, the continuous record is initiated from the current pickup position.
- Whenever the DISP button is pressed in the TEST-REC mode, the address changes as follows.
0050 — 03C0 — 0700 — 08A0 — 0050 —
- Whenever the BASS button is pressed in the TEST-REC mode, the digit which is changed by the SKIP UP/DOWN button changes as follows.
0050 — 0050 — 0050 — 0050 — 0050 —
- When the SKIP UP button is pressed in the TEST-REC mode, the digit of address specified by the BASS button is set to +1h. (0 to F)
- When the SKIP DOWN button is pressed in the TEST-REC mode, the digit of address specified by the BASS button is set to -1h. (0 to F)
* When the SKIP UP/DOWN button is held down, the setting changes continuously, one cycle being 100 ms.
- When the VOL UP/DOWN button is pressed in the TEST-REC mode or continuous record mode, the laser record power changes. (Servo gain changes also according to record power.)
* After the laser record power is indicated for one second, the address indication is restored. [R P W ▽ ▽]
- □□□□ : Address
- ▽ ▽ : Laser power cord
- Operation is disabled if the premastered disc or disc is in miserase-protected state.

9. NORMAL Mode

- When the STOP button is pressed while the NORMAL menu appears, the mode changes to the TEST mode stop state.
- Indication during operation
Indication of memory capacity on main unit LCD [□ □ _ * * * * _ * *] + Level meter
□ □ : Internal mode
* * * * : Address (Cluster section)
* * : Address (Sector section)
- Selection of sound volume, BASS, etc. is possible (without indication)
- Recording is also possible.

10. Digital input display Mode (Din Mon)

- When the STOP button is pressed while the digital input indication menu appears or during digital input information indication, the mode changes to the TEST mode stop state.
- In case of analog input or digital input unlocking the indication data is _.

11. Error data display Mode

- Reversing when SKIP DOWN button is pressed
- When the STOP button is pressed while the error data indication menu appears or during error data indication, the mode changes to the TEST mode stop state.
- Error data 0 is the latest error.
- Error which occurred in the TEST mode is also stored in the memory.
- When the DISP button is pressed while the error data indication menu appears, the error data is initialized. [C L E A R _]
- ◇ ◇ : Error Code

● Explanation of error history code

12h : RF side FG, TG, and TCRS adjustment termination failure	52h : SD write data write disabled
13h : Adjustment servo retraction excessive retrieval	71h : Pickup position initialization time-over
16h : C. IN detection time-over	72h : EEPROM data read check sum error
17h : A, B, E, F, and TCRSO offset measurement value out of tolerable range	73h : Record head drive disabled (by EJECT lever)
21h : Focus retraction completion allowable time-over	82h : Power overvoltage detection
23h : Track search completion allowable time-over	91h : Ambient temperature is higher than the allowable temperature.
24h : Disc linear speed measurement failure	
32h : P-TOC read failure	
42h : U-TOC read failure	
44h : U-TOC write data write disabled/read check error	

MD-MS722/C/W/MS721W

13. INNER Mode

- when the STOP button is pressed on the INNER menu (SQ), the state is changed to the TEST mode STOP state.
- : Address

EEPROM (IC402) writing procedure

1. Procedure to replace EE-PROM and write initial value of microcomputer in EEPROM

- (1) Replace EEPROM.
- (2) Deprive EEPROM of protection (connect the pins 8 and 6 of IC402).
- (3) Refer to the latest EEPROM data list.
- (4) Press the Display/Lower-case Character button, Enter/Synchro button and Play/Pause button to start the test mode.
- (5) Version display

Distination

EEPROM version (C ~ Z)

Microcomputer ROM version
- (6) The whole LCD lights.
- (7) Test mode stop state

[T E S T]
- (8) Press the "BASS" button, and press twice the "SKIP DOWN" button.

[E E P R O M]
- (9) Perform the operation to display "EEPROM SETTING MODE CHART", compare the EEPROM DATA LIST with the display, and set according to the EEPROM DATA LIST with the VOL UP or VOL DOWN key.
- (10) Set the temperature reference. (Refer to the Temperature Reference Setting Method.)
- (11) Set according to the EEPROM DATA LIST.
- (12) Press the Stop button.

[T E S T]
- (13) Press the Stop button.
- (14) After data is written in EEPROM, turn off power .
- (15) Restore protection of EEPROM (Disconnect connection made in Step (2) above).

2. Temperature reference setting method

[1] Measurement, calculation and setting procedure

- (1) Set the TEST mode.
 - Set TEST 1, 0 = '01', and turn on power (or set PLAY ON in standby state).
- (2) Start the EEPROM mode 'Temp' menu.
 - Key operation in order of BASS, SKIP-DOWN x 2 times, PLAY, PLAY in the test mode STOP state.
 - 'TM\$\$\$%' is displayed. (\$\$ = Temperature code, %% = Temperature reference)
- (3) Once press SKIP-UP, and determine the displayed microcomputer TEMP input AD value.
 - 'TPin##' is displayed. (## = TEMP input AD value)
- (4) At the ambient temperature, determine the temperature corrected value from the temperature measurement value correction table.
- (5) Determine the temperature reference, using the following formula.
 - Temperature reference = Microcomputer TEMP input AD value + Temperature corrected value
 - When data is written into EEPROM, the value shown above is recorded at the specified address.

[2] Temperature measurement value correction table

Ambient temperature	Temperature correction	Center temperature
+ 9°C ~ +11°C	- 05h	+ 10.0°C
+12°C ~ +14°C	- 04h	+ 12.7°C
+15°C ~ +16°C	- 03h	+ 15.4°C
+17°C ~ +19°C	- 02h	+ 18.2°C
+20°C ~ +22°C	- 01h	+ 20.9°C
+23°C ~ +24°C	± 00h	+ 23.6°C
+25°C ~ +27°C	+ 01h	+ 26.3°C
+28°C ~ +30°C	+ 02h	+ 29.0°C
+31°C ~ +33°C	+ 03h	+ 31.8°C

[3] Power IC VREF feed control output

- After automatic adjustment the temperature code is read. If it is within the following range, OK.

Ambient temperature	Temperature correction	Center temperature
- 9°C ~ +10°C	08h	+ 0.5°C
+ 3°C ~ +21°C	07h	+ 12.5°C
+15°C ~ +33°C	06h	+ 23.6°C
+26°C ~ +43°C	05h	+ 35.0°C

● EEPROM DATA LIST (EEPROM version f)

TEMP setting

Item display	Set values
T M _ _ ○ ○	Calculate values

Fucus setting

Item display	Set values
F G _ _ ○ ○	6 3 H
F F 1 _ ○ ○	7 0 H
F F 2 _ ○ ○	E 8 H
F Z H _ ○ ○	E D H
F L n _ ○ ○	0 9 H
D J G _ ○ ○	1 4 H
F L V _ ○ ○	2 0 H
W T f _ ○ ○	2 0 H
F S S _ ○ ○	A A H

Tracking setting

Item display	Set values
T G _ _ ○ ○	2 6 H
T F 1 _ ○ ○	7 0 H
T F 2 _ ○ ○	E 0 H
T F S _ ○ ○	0 0 H
T B o _ ○ ○	2 B H
T B t _ ○ ○	1 4 H
T K o _ ○ ○	2 B H
T K t _ ○ ○	1 2 H
T D o _ ○ ○	6 7 H
T D t _ ○ ○	3 4 H
S C o _ ○ ○	0 0 H
S C t _ ○ ○	4 0 H
S C m _ ○ ○	5 3 H
C L p _ ○ ○	1 8 H
C L r _ ○ ○	2 8 H
J P I _ ○ ○	0 0 H
K 1 0 _ ○ ○	6 5 H

Spindle setting

Item display	Set values
S P G _ ○ ○	1 4 H
S P i _ ○ ○	A A H
S P m _ ○ ○	7 9 H
S P o _ ○ ○	4 F H
S P 1 _ ○ ○	1 0 H
S P 2 _ ○ ○	6 0 H
S P 3 _ ○ ○	F 2 H
S P 4 _ ○ ○	F 2 H
S P 5 _ ○ ○	1 0 H
S P D _ ○ ○	6 1 H
S P K _ ○ ○	8 B H

BASS setting

Item display	Set values
B S 1 _ ○ ○	0 0 H
B S 2 _ ○ ○	2 D H
B S 3 _ ○ ○	4 B H

Sled setting

Item display	Set values
S L G _ ○ ○	6 D H
S L 2 _ ○ ○	2 0 H
S L M _ ○ ○	4 F H
S L V _ ○ ○	3 6 H
S K k _ ○ ○	4 3 H
S K t _ ○ ○	5 4 H
S K m _ ○ ○	4 D H
W T m _ ○ ○	2 4 H
M V 1 _ ○ ○	4 A H
M V 2 _ ○ ○	A A H
S R V _ ○ ○	0 0 H

ADJ. SET setting

Item display	Set values
C O K _ ○ ○	A 0 H
F A T _ ○ ○	C 0 H
T A T _ ○ ○	3 E H
C A T _ ○ ○	2 0 H
F A B _ ○ ○	E 0 H

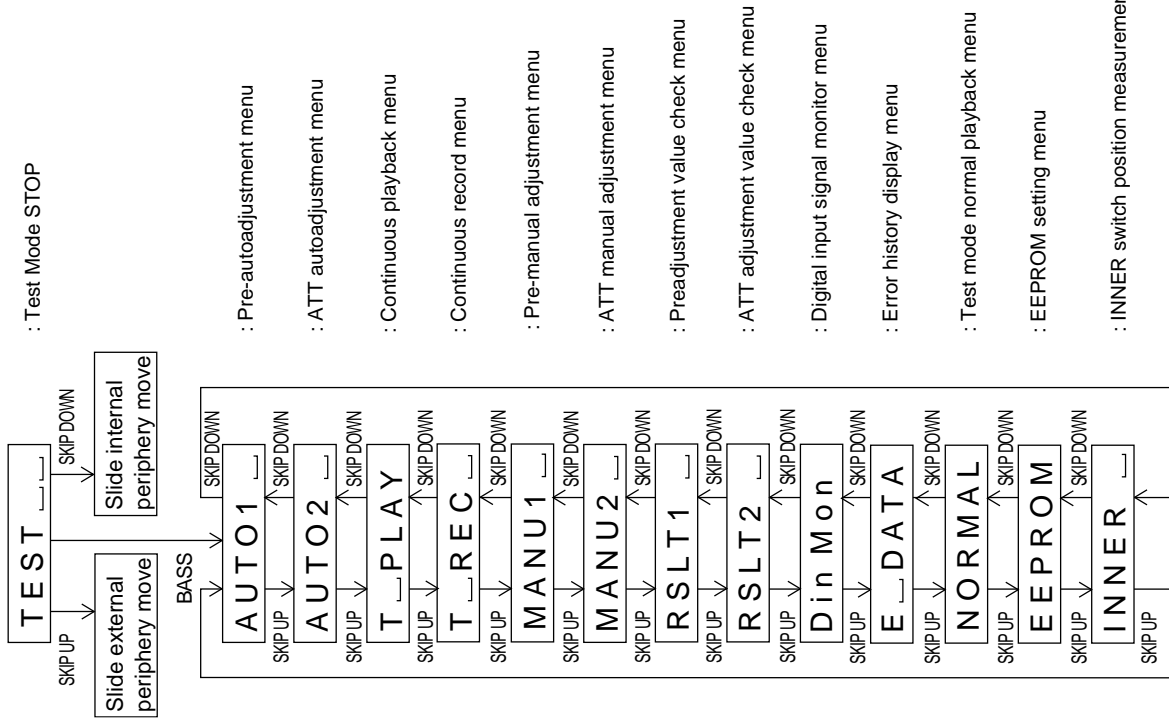
EQ. SET setting

Item display	Set values
H Q 1 _ ○ ○	9 0 H
H Q 2 _ ○ ○	9 0 H
H S G _ ○ ○	1 1 H
H S O _ ○ ○	F D H
L Q 1 _ ○ ○	9 0 H
L Q 2 _ ○ ○	9 0 H
L S G _ ○ ○	1 1 H
L S O _ ○ ○	0 0 H
G Q 1 _ ○ ○	9 8 H
G Q 2 _ ○ ○	8 4 H
G S G _ ○ ○	1 1 H
G S O _ ○ ○	0 0 H

Control setting

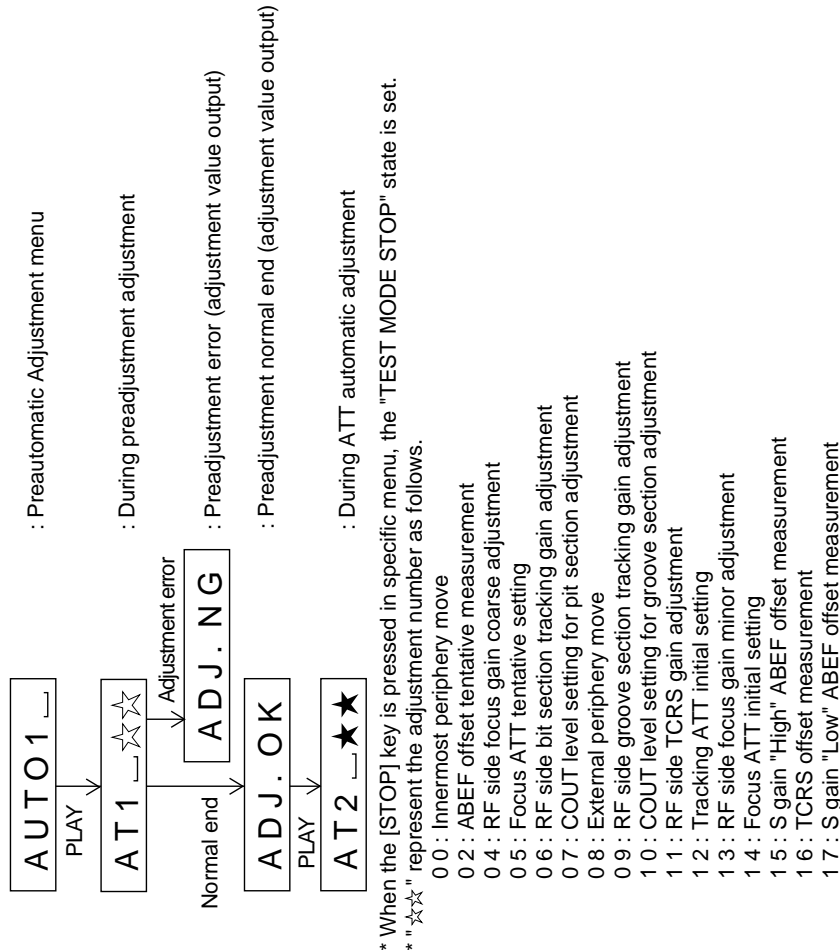
Item display	Set values
C T 0 _ ○ ○	0 5 H
C T 1 _ ○ ○	9 5 H
C T 2 _ ○ ○	4 0 H
C T 3 _ ○ ○	3 0 H
R C 0 _ ○ ○	C 0 H
R C 1 _ ○ ○	F E H
S Y C _ ○ ○	A 6 H
P W C _ ○ ○	1 2 H
P W L _ ○ ○	6 6 H
D R 1 _ ○ ○	4 9 H
D R 2 _ ○ ○	4 9 H
I N 1 _ ○ ○	D 4 H
I N 2 _ ○ ○	7 1 H
I N H _ ○ ○	6 4 H
D R H _ ○ ○	7 4 H
P L E _ ○ ○	9 6 H
R C E _ ○ ○	5 4 H
E L T _ ○ ○	7 2 H
S L T _ ○ ○	7 3 H
S P M _ ○ ○	0 0 H
M S L _ ○ ○	0 0 H
U S 0 _ ○ ○	0 0 H
U S 1 _ ○ ○	0 0 H
U S 2 _ ○ ○	0 0 H

Test Mode Change Chart
Tset Mode Menu



* When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
* When the [PLAY] key operation is performed in the specific menu, the operation of this menu is executed.

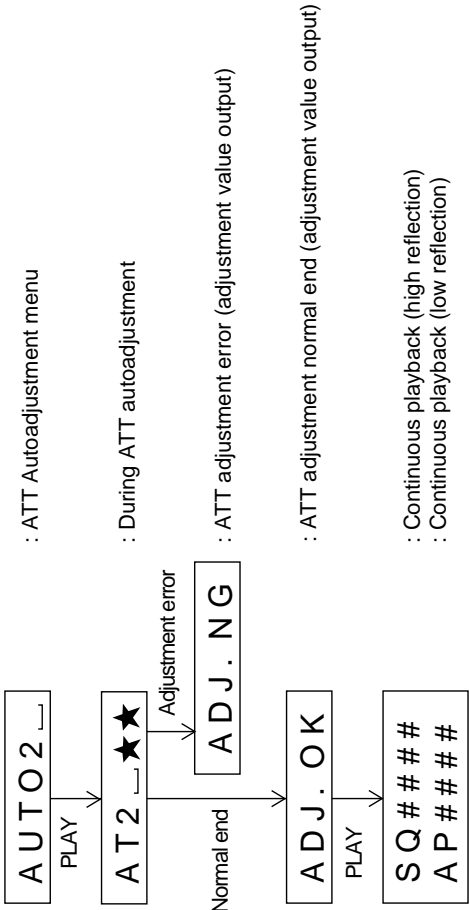
Preautomatic Adjustment



* When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
* "☆☆☆" represent the adjustment number as follows.

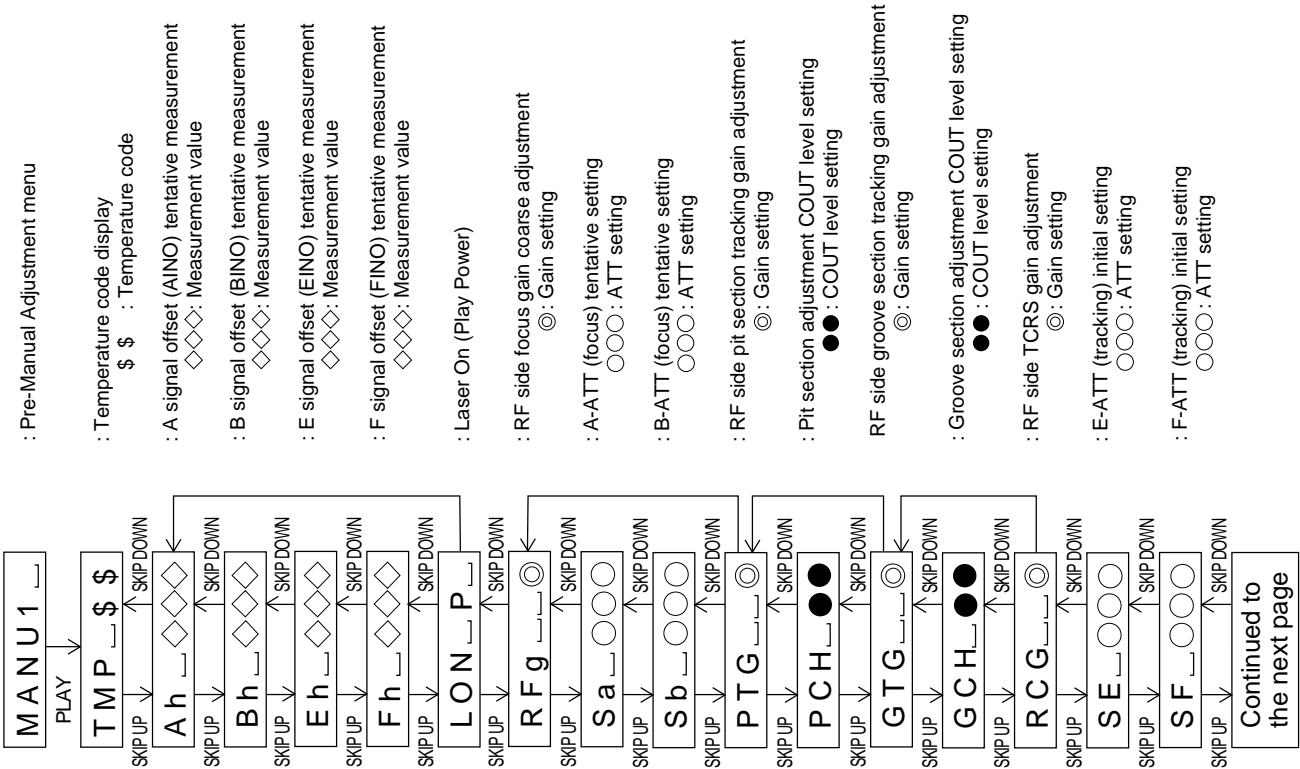
- 0 0 : Innermost periphery move
- 0 2 : ABEF offset tentative measurement
- 0 4 : RF side focus gain coarse adjustment
- 0 5 : Focus ATT tentative setting
- 0 6 : RF side bit section tracking gain adjustment
- 0 7 : COUT level setting for pit section adjustment
- 0 8 : External periphery move
- 0 9 : RF side groove section tracking gain adjustment
- 1 0 : COUT level setting for groove section adjustment
- 1 1 : RF side TCRS gain adjustment
- 1 2 : Tracking ATT initial setting
- 1 3 : RF side focus gain minor adjustment
- 1 4 : Focus ATT initial setting
- 1 5 : S gain "High" ABEF offset measurement
- 1 6 : TCRS offset measurement
- 1 7 : S gain "Low" ABEF offset measurement

ATT Auto Adjustment

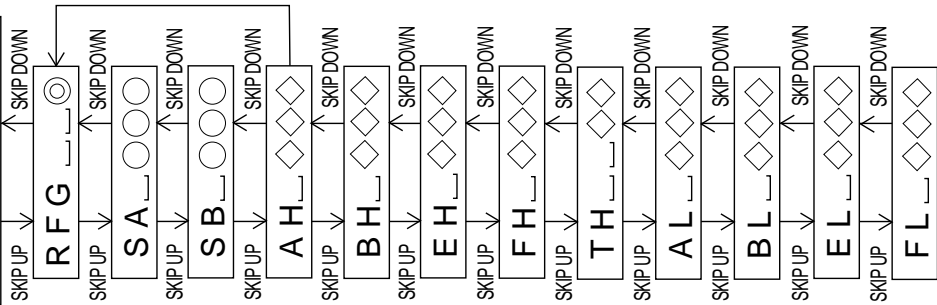


* When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
* "★★" represent the adjustment number as follows.
0 0 : Innermost periphery move
0 3 : Pit section tracking ATT setting
0 4 : Pit section focus ATT setting
0 6 : External periphery move
0 7 : TCRS ATT setting
0 8 : Groove section tracking ATT setting
0 9 : Groove section focus ATT setting
(low reflection only)
(low reflection only)
(low reflection only)
(low reflection only)

Pre-Manual Adjustment

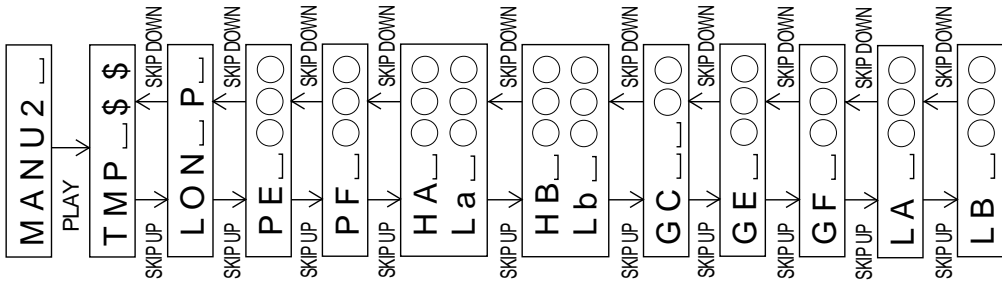


Continued from the preceding page



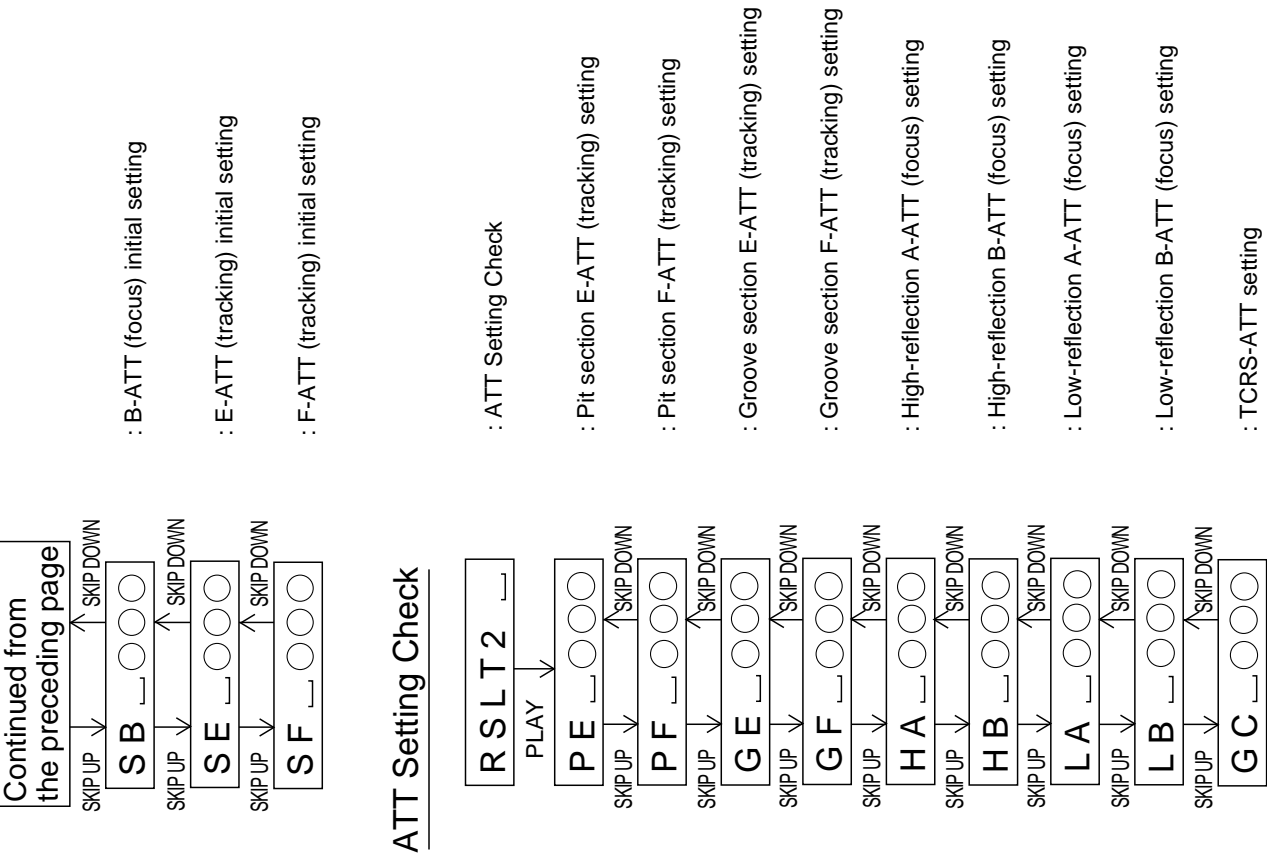
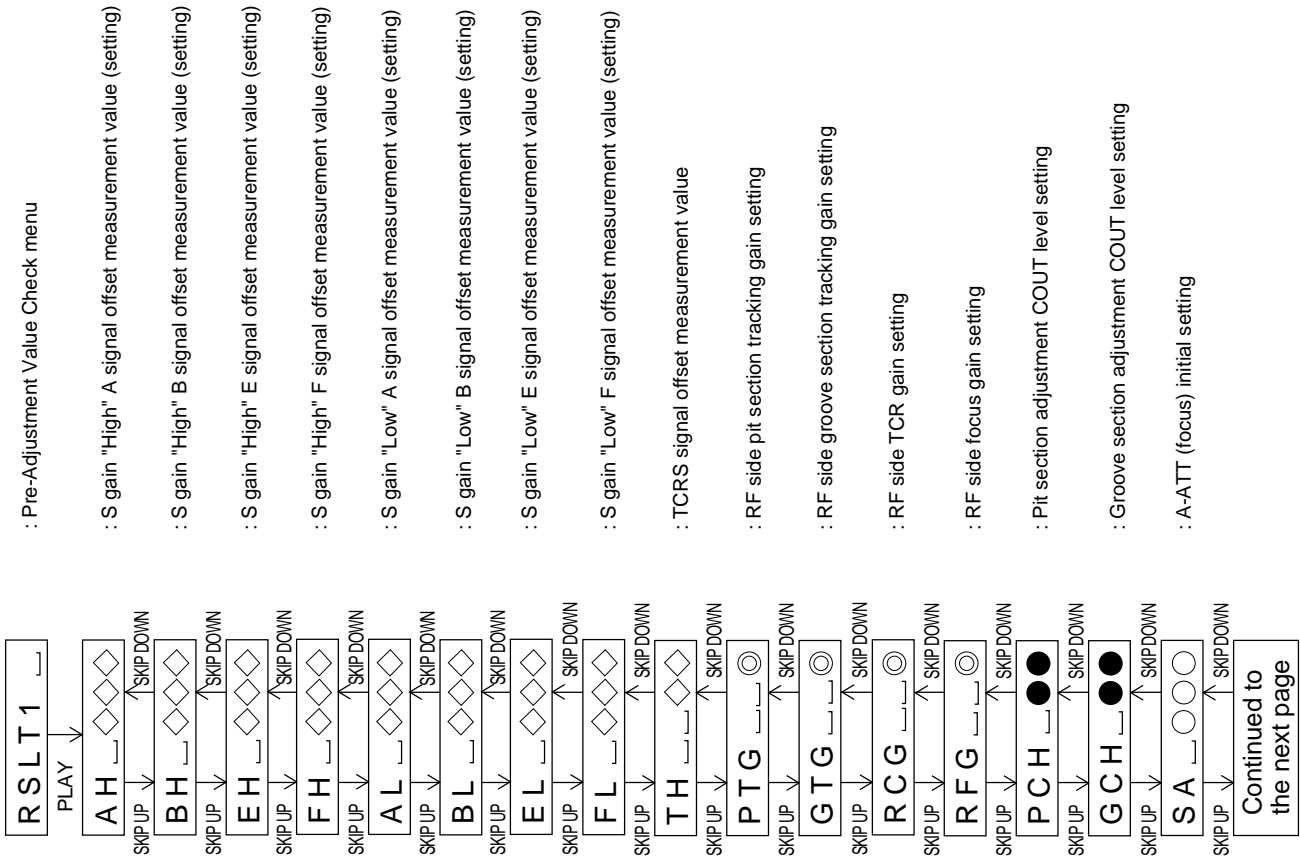
- : RF side focus gain minor adjustment
⊙ : Gain setting
- : A-ATT (focus) initial setting
: ATT setting
- : B-ATT (focus) initial setting
○○○ : ATT setting
- : S gain "High" A signal offset (AINO) measurement
◇◇◇ : Measurement value
- : S gain "High" B signal offset (BINO) measurement
◇◇◇ : Measurement value
- : S gain "High" E signal offset (EINO) measurement
◇◇◇ : Measurement value
- : S gain "High" F signal offset (FINO) measurement
◇◇◇ : Measurement value
- TCRS signal offset (TCRSO) measurement
◇◇ : ATT setting
- : S gain "Low" A signal offset (AINO) measurement
◇◇◇ : Measurement value
- : S gain "Low" B signal offset (BINO) measurement
◇◇◇ : Measurement value
- : S gain "Low" E signal offset (EINO) measurement
◇◇◇ : Measurement value
- : S gain "Low" F signal offset (FINO) measurement
◇◇◇ : Measurement value

ATT Manual Adjustment



- : Temperature code displayATT manual adjustment menu
- : Temperature code display
\$ \$: Temperature code
- : Laser ON (Play Power)
- : Pit section E-ATT (tracking) setting
○○○ : ATT setting
- : Pit section E-ATT (tracking) setting
○○○ : ATT setting
- : High reflection: A-ATT (focus) setting
- : Low reflection: A-ATT (focus) setting
○○○ : ATT setting
- : High reflection: B-ATT (focus) setting
- : Low reflection: B-ATT (focus) setting
○○○ : ATT setting
- : TCRS ATT setting
○○ : ATT setting
- :Groove section E-ATT (tracking) setting
○○○ : ATT setting
- :Groove section F-ATT (tracking) setting
○○○ : ATT setting
- : Low reflection: A-ATT (focus) setting
○○○ : ATT setting
- : Low reflection: B-ATT (focus) setting
○○○ : ATT setting

Pre-Adjustment Value Check

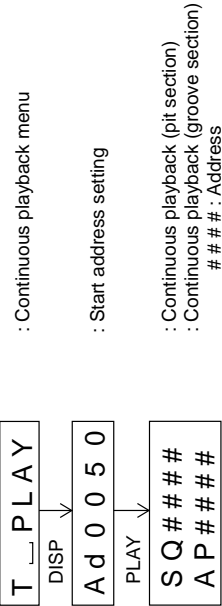


Continuous Playback

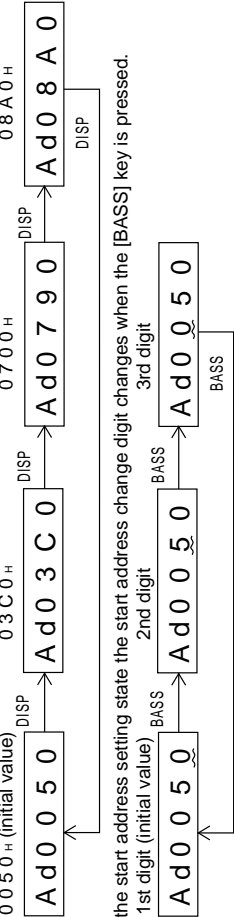
- Continuous playback from current pickup position



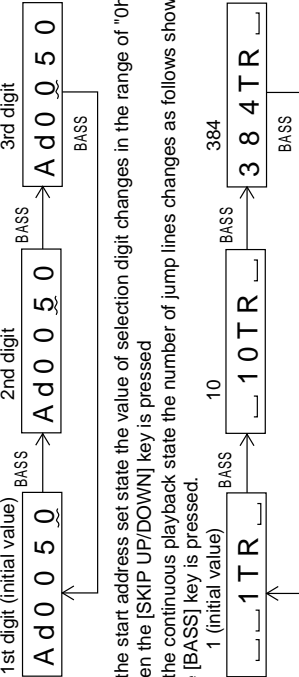
- Continuous playback from any address



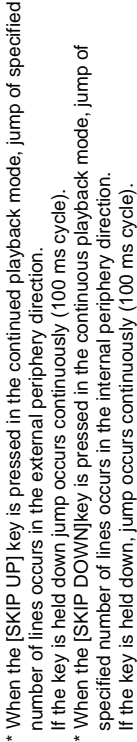
- When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- In the start address set state the start address changes as follows when the [DISP] key is pressed.



- In the start address setting state the start address change digit changes when the [BASS] key is pressed.

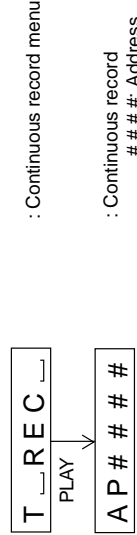


- In the start address set state the value of selection digit changes in the range of "0h to Fh" when the [SKIP UP/DOWN] key is pressed
- If the key is held down jump occurs continuously (100 ms cycle).
- In the continuous playback state the number of jump lines changes as follows shown the [BASS] key is pressed.
- If the key is held down, jump occurs continuously (100 ms cycle).

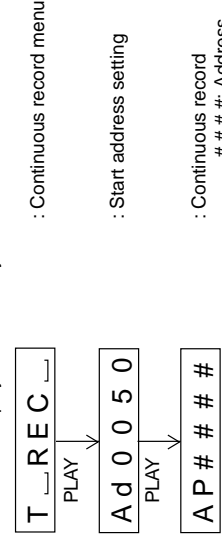


Continuous Rrecord

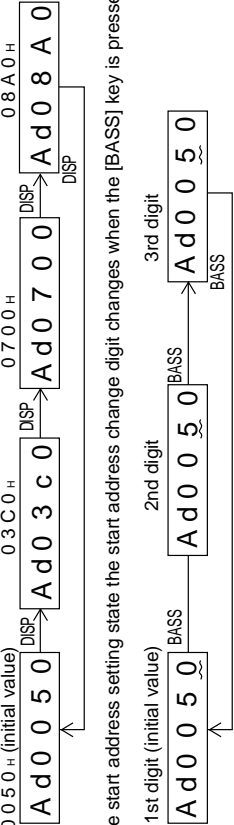
- Continuous record from the current pickup position



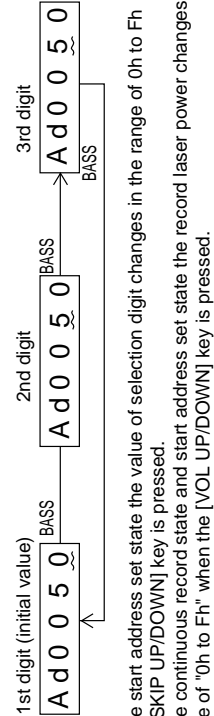
- Continuous record playback from any address



- When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- In the start address set state the start address changes as follows when the [DISP] key is pressed.

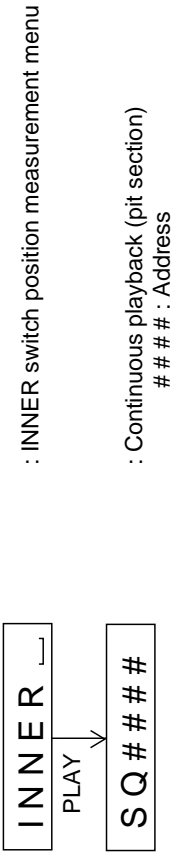


- In the start address setting state the start address change digit changes when the [BASS] key is pressed.



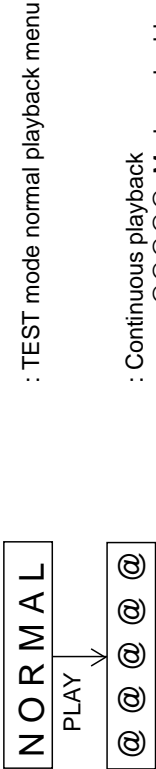
- In the start address set state the value of selection digit changes in the range of 0h to Fh when the [SKIP UP/DOWN] key is pressed.
- In the continuous record state and start address set state the record laser power changes in the range of "0h to Fh" when the [VOL UP/DOWN] key is pressed.

Inner Switch Position Measurement



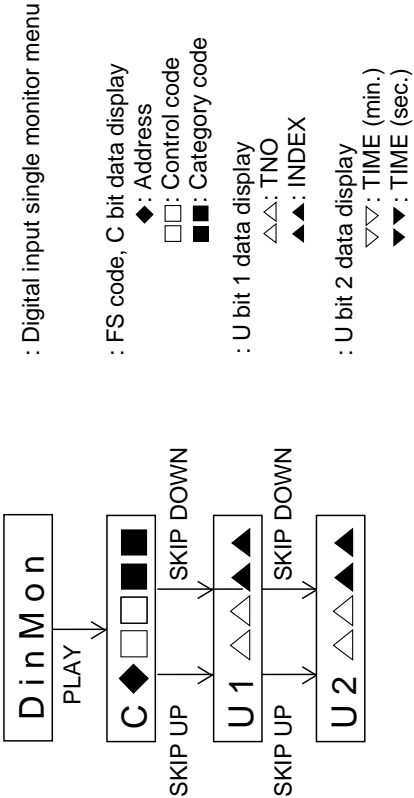
* When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.

Test Mode Normal Playback



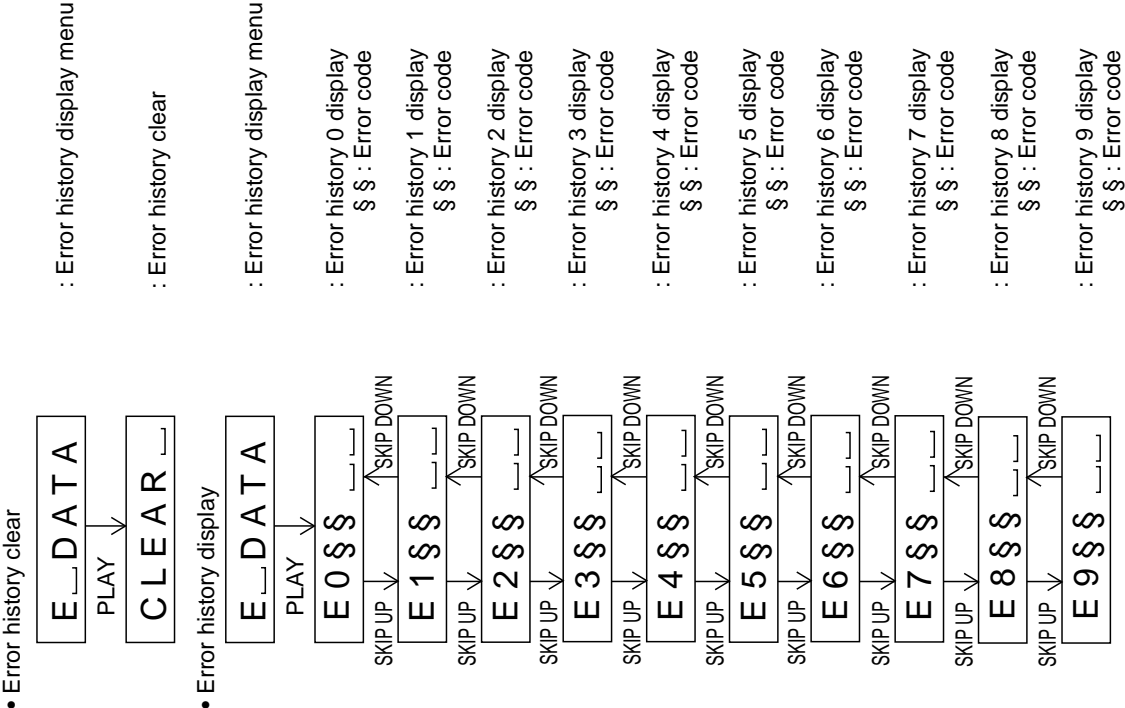
* When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.

Digital Input Signal Monitor



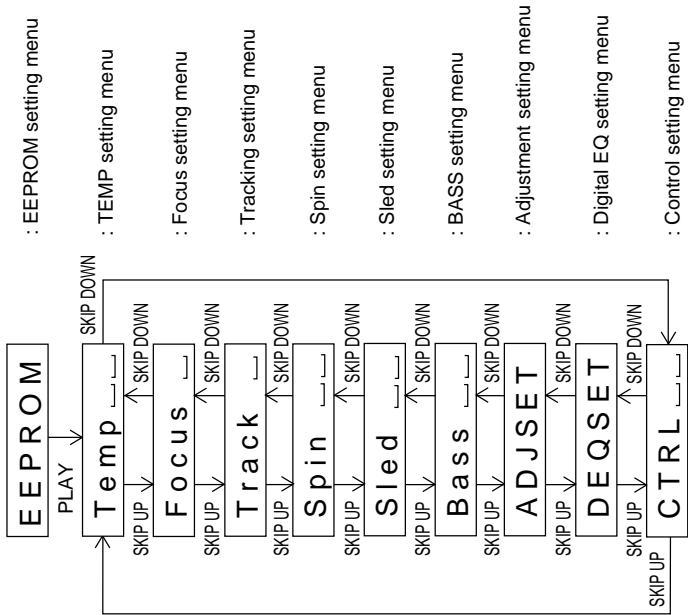
* When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.

Error History Display



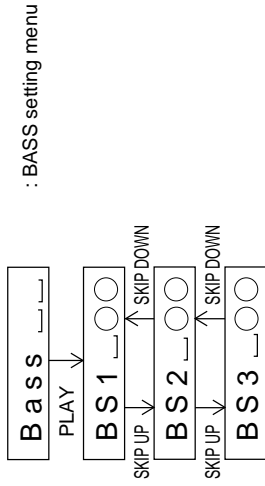
* When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.

EEPROM Setting



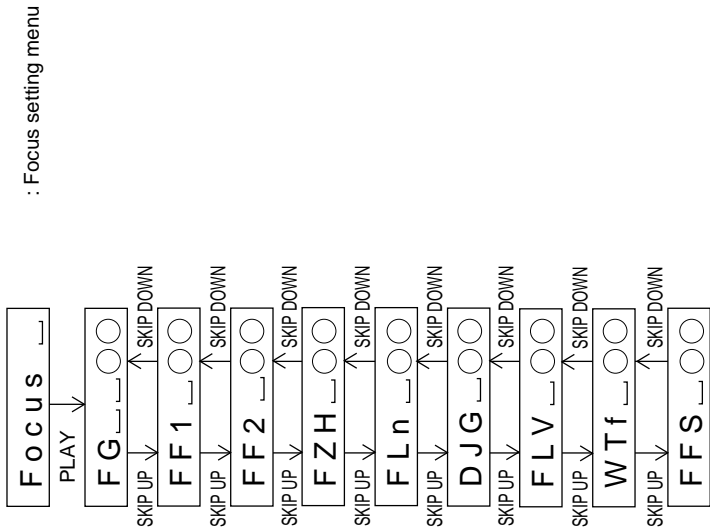
- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [PLAY] key operation is performed in the specific state, the specific setting menu is set.

BASS Setting



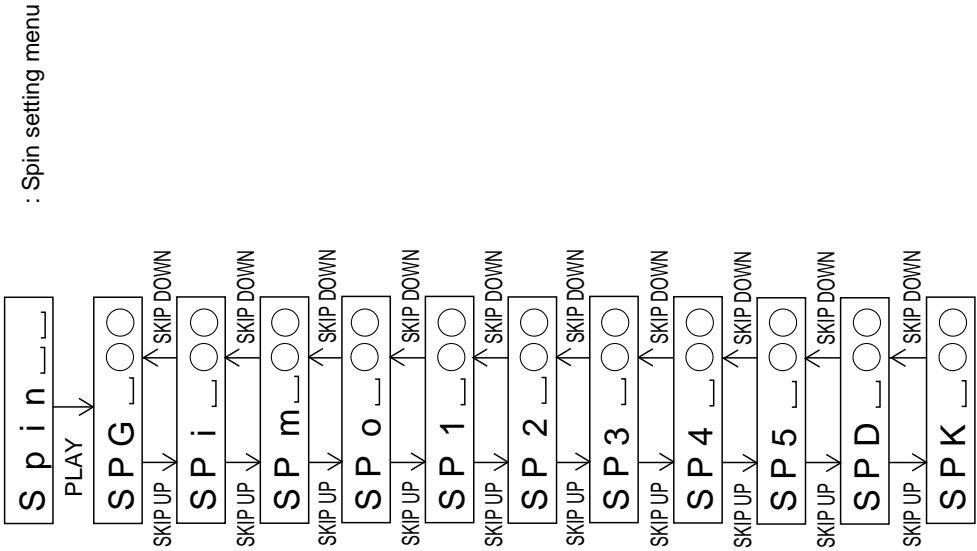
- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
- * In the specific state the setting changes in the range of "00h to FFh" when the [VOL UP/DOWN] key is pressed. (The upper limit varies depending on the items)

Focus Setting



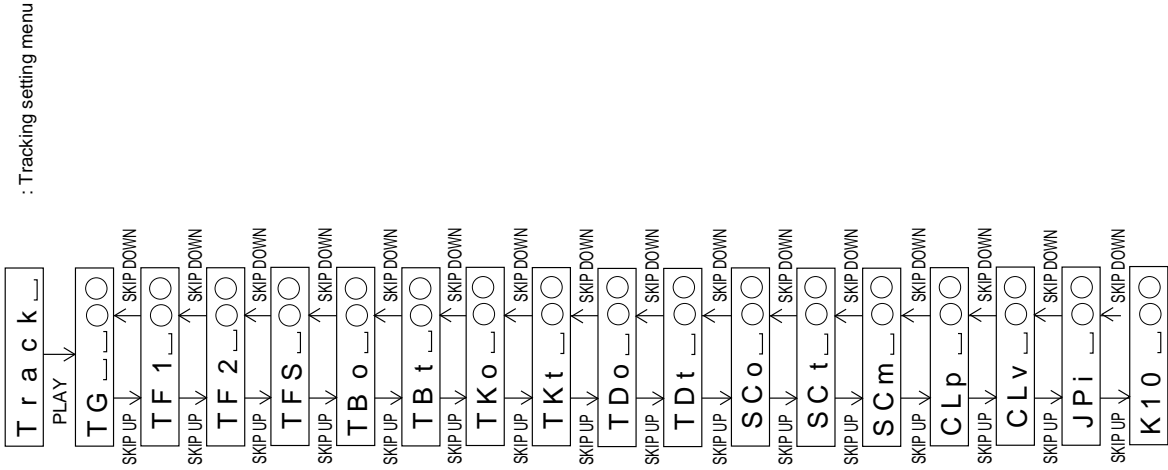
- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
- * In specific state the setting changed in the range of "00h to FFh" when the [VOL UP/DOWN] key is pressed. (The upper limit varies depending on the items)

Spin Setting



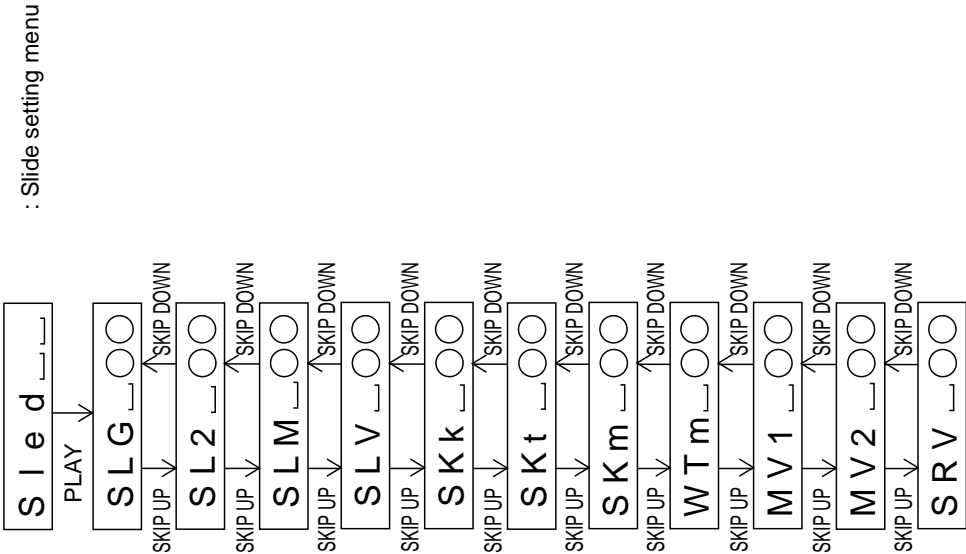
- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
- * In specific state the setting changed in the range of "00h to FFh" when the [VOL UP/DOWN] key is pressed. (The upper limit varies depending on the items)

Tracking Setting



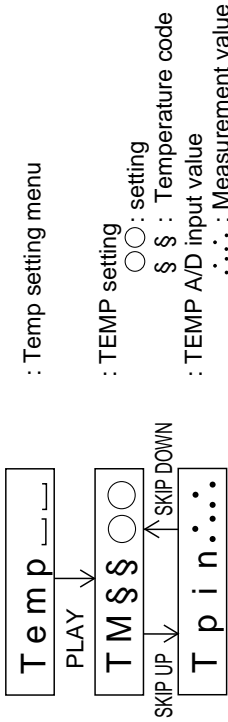
- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
- * In the specific state the setting changes in the range of "00h to FFh" when the [VOL UP/DOWN] key is pressed. (The upper limit varies depending on the items)

Slide Setting



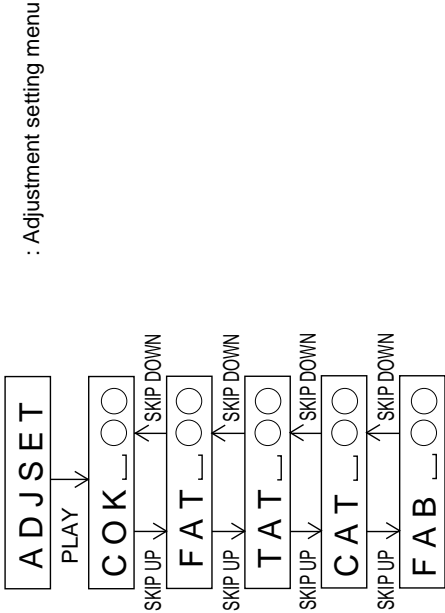
- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
- * In the specific state the setting changes in the range of "00h to FFh" when the [VOL UP/DOWN] key is pressed.
(The upper limit varies depending on the items)

TEMP Setting



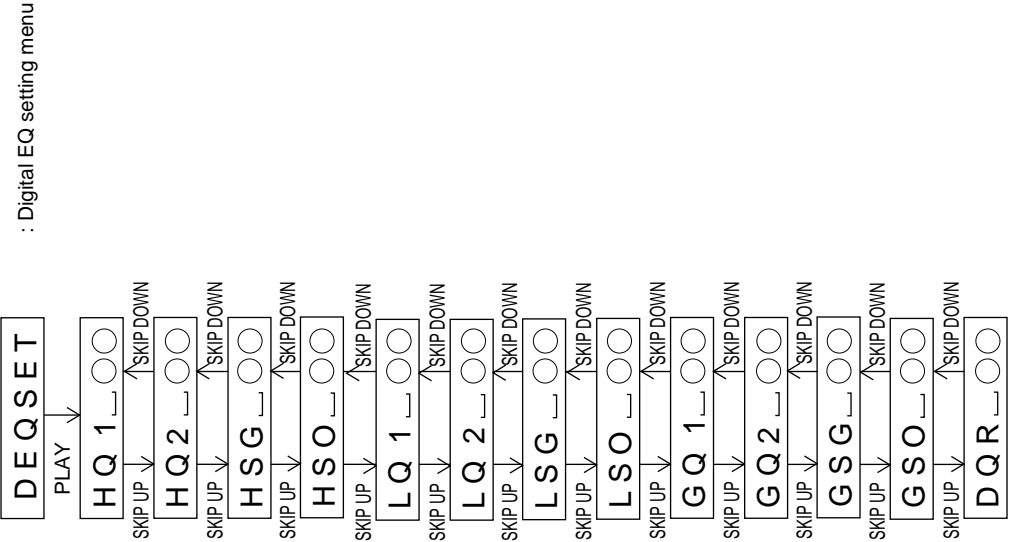
- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
- * In the specific state the setting changes in the range of "00h to FFh" when the [VOL UP/DOWN] key is pressed.

Adjustment Setting

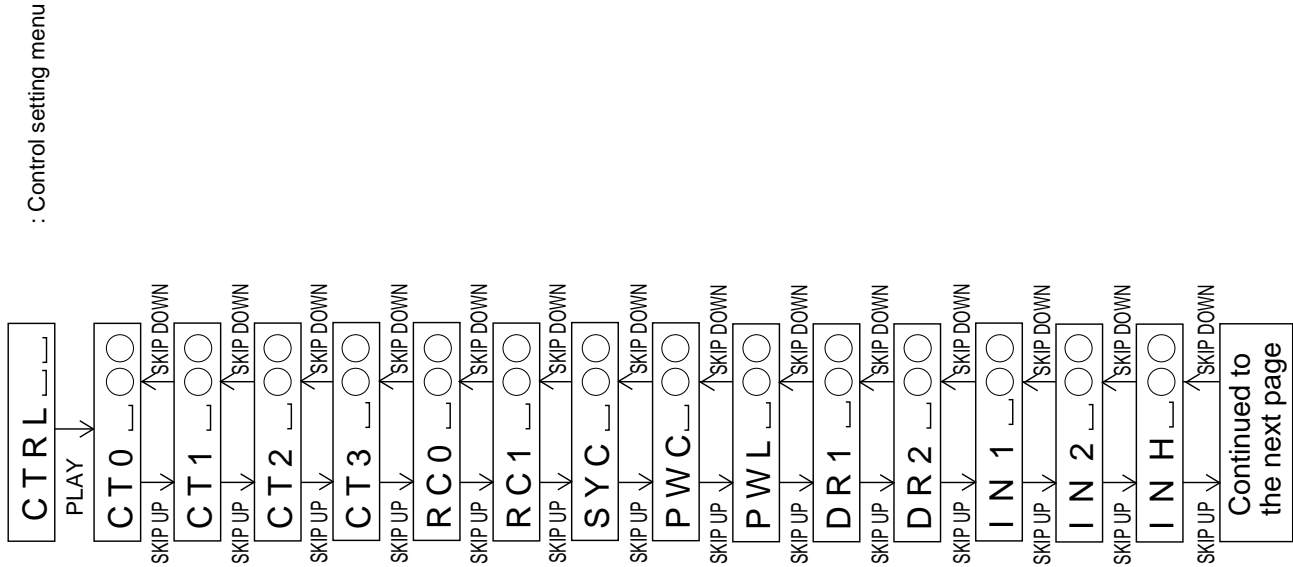


- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
- * In the specific setting display state the setting change digit changes when the [P-MODE] key is pressed.
1st digit (initial value) 2nd digit
- * In the specific state the setting changes in the range of "0h to Fh" when the [VOL UP/DOWN] key is pressed.

Digital EQ Setting

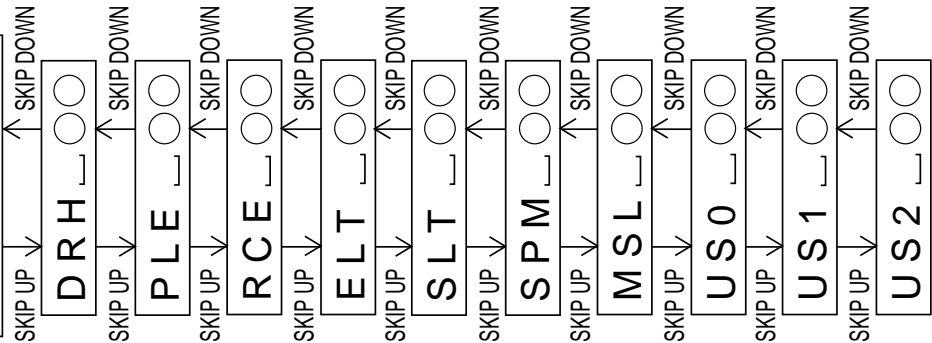


Control Setting

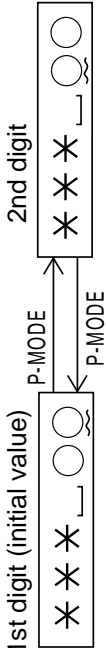


* When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
* When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
* In the specific setting display state the setting change digit changes when the [P-MODE] key is pressed.
1st digit (initial value) 2nd digit
* * * * * * * * * *
P-MODE P-MODE
* In the specific state the setting changes in the range of "0h to Fh" when the [VOL UP/DOWN] key is pressed.

Continued from
the preceding page



- * When the [STOP] key is pressed in specific menu, the "TEST MODE STOP" state is set.
- * When the [DISP] key operation is performed in the specific state, the menu changes to "TEMP SETTING menu".
- * In the specific setting display state the setting change digit changes when the [P-MODE] key is pressed.



- * In the specific state the setting changes in the range of "0h to Fh" when the [VOL UP/DOWN] key is pressed.

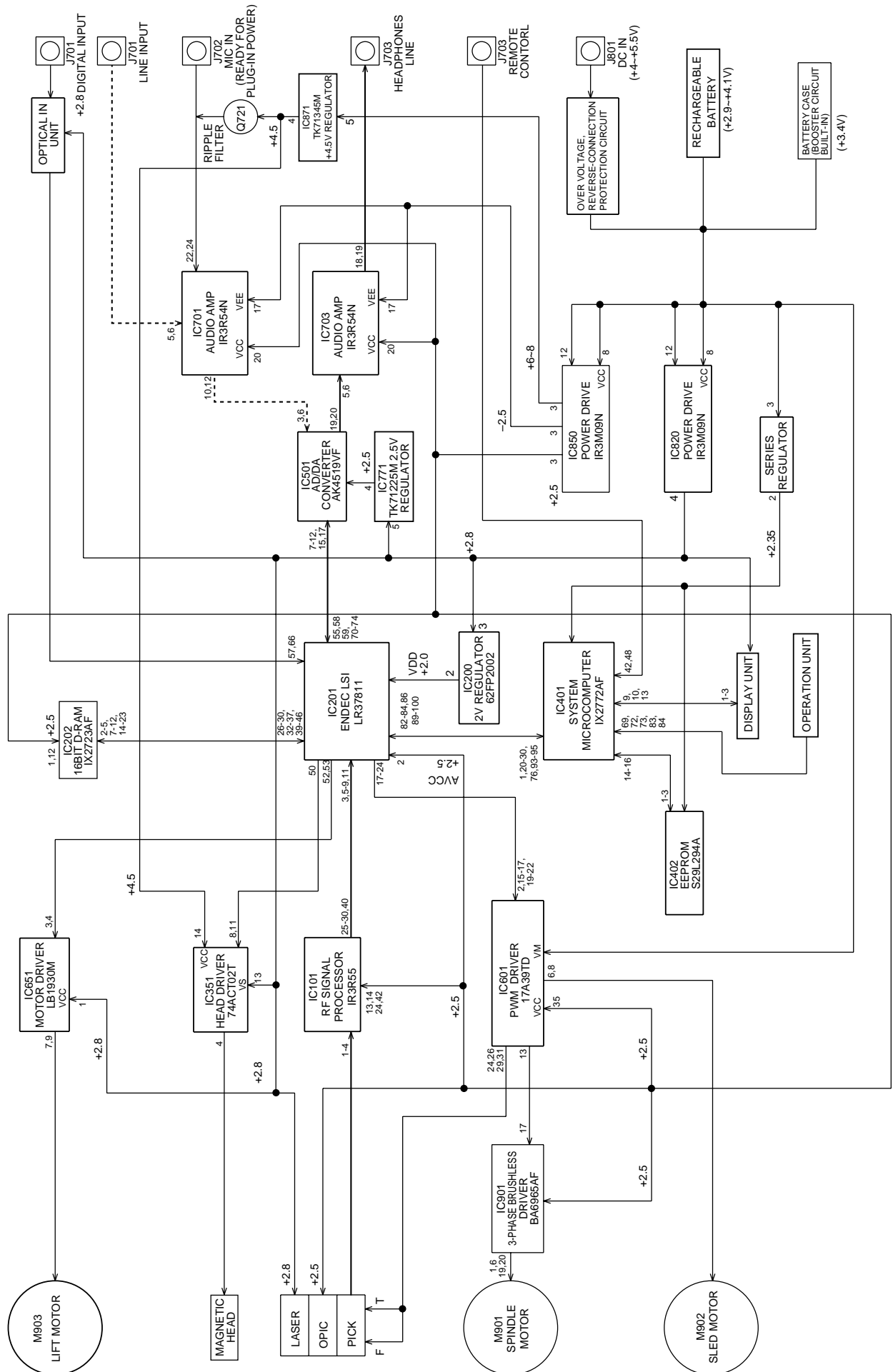


Figure 29 BLOCK DIAGRAM



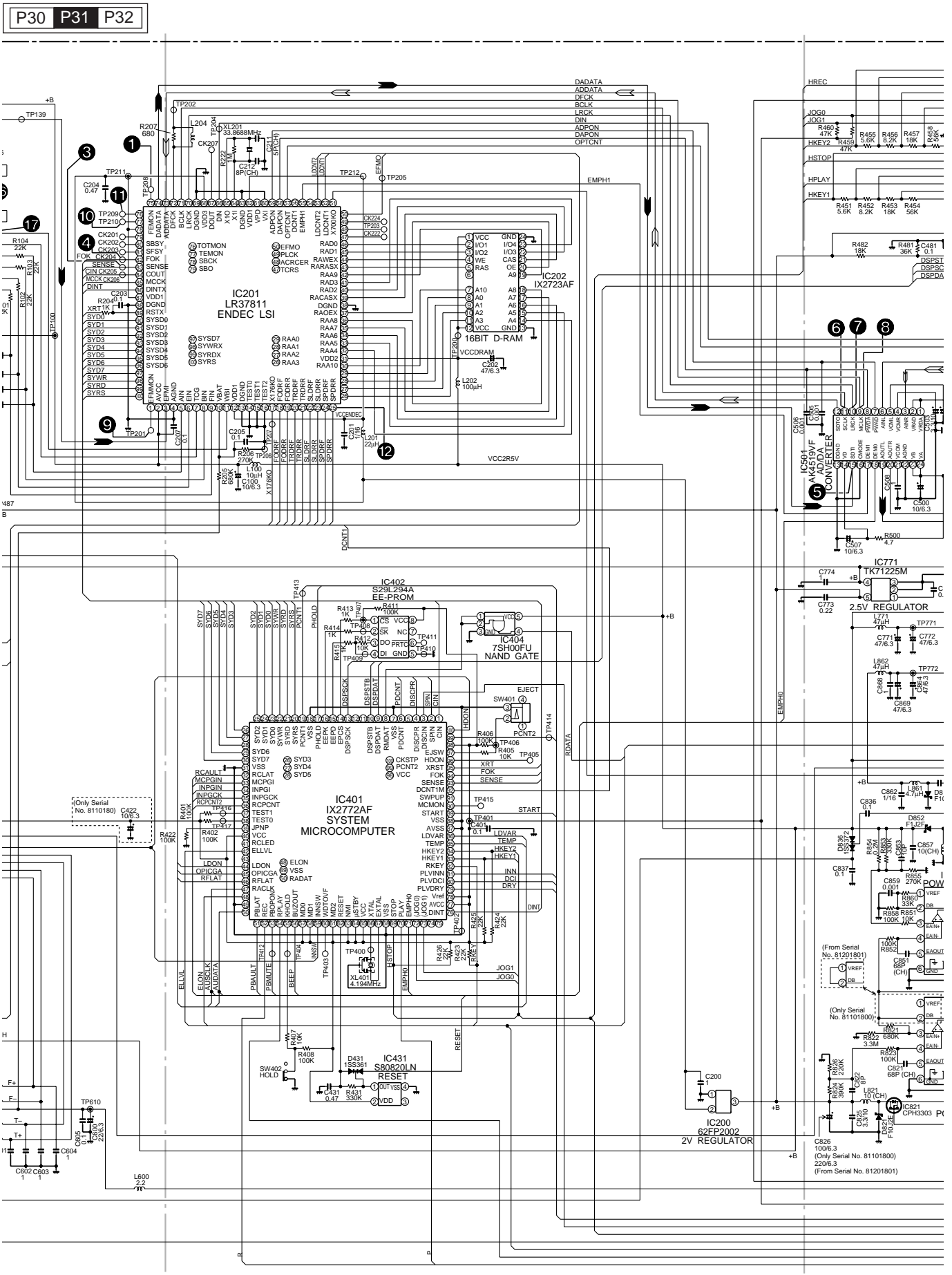
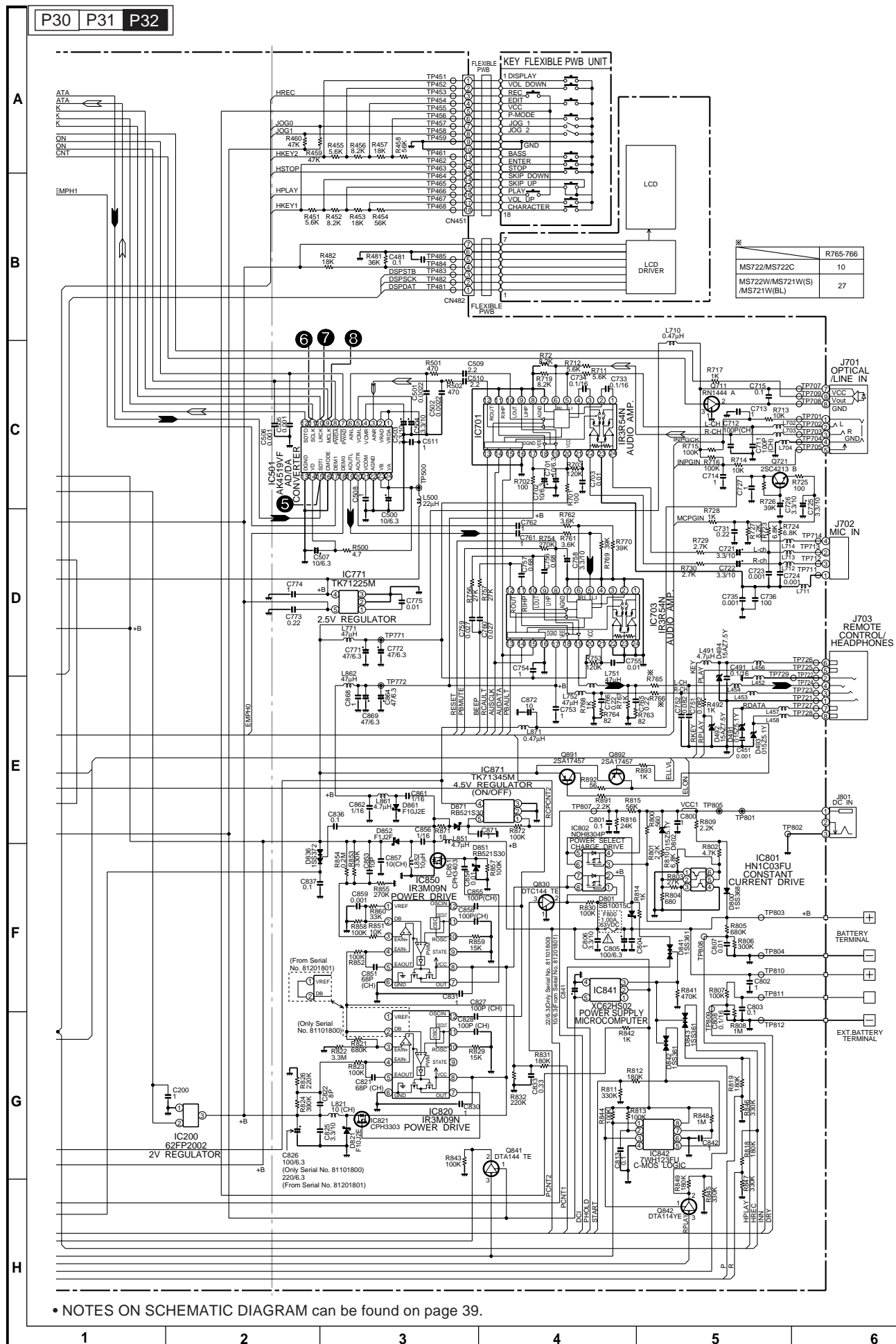


Figure 31 SCHEMATIC DIAGRAM (2/4)



IC101		IC200				IC401				IC501		IC701		IC820	
PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE	PIN NO.	VOLTAGE
1	0.7V	1	1V	51	1V	1	0V	51	2.35V	1	2.5V	1	0V	1	1.25V
2	0.7V	2	2.5V	52	0V	2	2.48V	52	0V	2	2.5V	2	0V	2	1.2V
3	0.7V	3	1.27V	53	0V	3	0V	53	2.35V	3	0V	3	0V	3	0.96V
4	0.7V	4	0V	54	0V	4	2.33V	54	0V	4	0V	4	0V	4	1V
5	1.29V	5	1.27V	55	0V	5	NC	55	2.33V	5	0V	5	0V	5	0.95V
6	1.26V	6	1.27V	56	2V	6	0V	56	0V	6	0V	6	0V	6	0V
7	0.7V	7	1.27V	57	0V	7	0V	57	2.35V	7	0V	7	0V	7	3.55V
8	1.26V	8	1.27V	58	0V	8	0V	58	2.35V	8	0V	8	0V	8	4.8V
9	1.26V	9	1.26V	59	0V	9	0V	59	0.3V	9	1V	9	0V	9	2.47V
10	1.26V	10	2.2V	60	0V	10	2.35V	60	2.35V	10	1V	10	0V	10	0.4V
11	1.26V	11	1.43V	61	0.8V	11	0V	61	2.35V	11	1V	11	0V	11	1V
12	1.26V	12	2V	62	2V	12	2.35V	62	2.27V	12	0V	12	0V	12	1V
13	2.52V	13	0V	63	0V	13	2.35V	63	2.35V	13	0V	13	0V		
14	2.52V	14	0V	64	0.9V	14	2.35V	64	2.35V	14	2.5V	14	0V		
15	0.18V	15	0V	65	0.79V	15	-	65	2.35V	15	0V	15	0V		
16	2.52V	16	0V	66	1.46V	16	0V	66	1.1V	16	0V	16	0V		
17	2.52V	17	1V	67	1V	17	2.35V	67	1.1V	17	0V	17	-2.65V		
18	0V	18	0V	68	2V	18	0V	68	0V	18	0V	18	0V		
19	0V	19	0V	69	0V	19	2.35V	69	2.34V	19	0V	19	0V		
20	1.46V	20	0V	70	1V	20	0V	70	0V	20	0V	20	2.51V		
21	2.34V	21	0V	71	1V	21	2.35V	71	0V	21	0V	21	0.8V		
22	0V	22	0V	72	0V	22	2.35V	72	2.24V	22	0V	22	0V		
23	0V	23	0V	73	0V	23	0V	73	2.24V	23	2.5V	23	0V		
24	2.51V	24	0V	74	0V	24	-	74	-	24	2.5V	24	0V		
25	1.26V	25	0V	75	1V	25	-	75	2.35V						
26	1.26V	26	1.58V	76	1V	26	-	76	2V						
27	1.26V	27	0.87V	77	1V	27	-	77	2.35V						
28	1.26V	28	0.87V	78	2V	28	-	78	2.35V						
29	1.26V	29	1.73V	79	0V	29	-	79	0V						
30	1.6V	30	1.1V	80	2V	30	-	80	1.55V						
31	1.26V	31	2.5V	81	1V	31	0V	81	1.48V						
32	1.26V	32	0.6V	82	2V	32	0V	82	2.12V						
33	1.26V	33	0.8V	83	0V	33	2.14V	83	2.34V						
34	NC	34	1.9V	84	0V	34	2.5V	84	2.34V						
35	1.26V	35	0.9V	85	1V	35	2.5V	85	1.47V						
36	1.26V	36	1.29V	86	2V	36	0V	86	0V						
37	0V	37	1.8V	87	2V	37	0V	87	0V						
38	1.26V	38	0V	88	0V	38	2.35V	88	0V						
39	1.26V	39	1.9V	89	2.33V	39	2.35V	89	0V						
40	1.26V	40	1.6V	90	1.24V	40	2.35V	90	0V						
41	1.26V	41	1.64V	91	1.46V	41	0V	91	0V						
42	2.52V	42	1.1V	92	0V	42	2V	92	2.34V						
43	0V	43	1.7V	93	0.1V	43	0V	93	0V						
44	0V	44	2.5V	94	0.35V	44	0V	94	2V						
45	1.26V	45	1.6V	95	0V	45	0V	95	2.35V						
46	1.26V	46	0V	96	1.56V	46	2.35V	96	0V						
47	1.26V	47	0V	97	0.25V	47	0V	97	0V						
48	0V	48	1.93V	98	2.28V	48	2V	98	2.25V						
		49	1V	99	2.34V	49	0V	99	2.35V						
		50	0.9V	100	0V	50	0V	100	2.35V						

IC202	
PIN NO.	VOLTAGE
1	2.5V
2	1.23V
3	1.35V
4	2.37V
5	1.71V
6	NC
7	0.9V
8	1.76V
9	0.9V
10	0.9V
11	0.58V
12	2.5V
13	0V
14	0.5V
15	0.79V
16	1.93V
17	0.93V
18	1.26V
19	1.1V
20	1.78V
21	2.05V
22	1.63V
23	1.65V
24	0V

IC351	
PIN NO.	VOLTAGE
1	0V
2	0V
3	2.35V
4	0V
5	0V
6	2.35V
7	0V
8	0.91V
9	2.5V
10	0V
11	0.91V
12	2.35V
13	0V
14	4.54V

IC402	
PIN NO.	VOLTAGE
1	2.35V
2	0V
3	-
4	-
5	0V
6	0V
7	0V
8	2.35V

IC404	
PIN NO.	VOLTAGE
1	0.22V
2	0.22V
3	0V
4	2.33V
5	2.5V

IC431	
PIN NO.	VOLTAGE
1	2.35V
2	2.35V
3	0V
4	0V

IC401	
PIN NO.	VOLTAGE
1	0V
2	2.48V
3	0V
4	2.33V
5	NC
6	0V
7	0V
8	0V
9	0V
10	2.35V
11	0V
12	2.35V
13	2.35V
14	2.35V
15	-
16	0V
17	2.35V
18	0V
19	2.35V
20	0V
21	2.35V
22	2.35V
23	0V
24	-
25	-
26	-
27	-
28	-
29	-
30	-
31	0V
32	0V
33	2.14V
34	2.5V
35	2.5V
36	0V
37	0V
38	2.35V
39	2.35V
40	2.35V
41	0V
42	2V
43	0V
44	0V
45	0V
46	2.35V
47	0V
48	2V
49	0V
50	0V

IC4371	
PIN NO.	VOLTAGE
1	0V
2	0V
3	0V
4	4.5V
5	6.1V

IC601	
PIN NO.	VOLTAGE
1	0V
2	1V
3	2.34V
4	0V
5	4.86V
6	0V
7	0V
8	0V
9	4.86V
10	4.86V
11	0V
12	0V
13	0V
14	4.86V
15	0V
16	0V
17	0V
18	0V
19	0V
20	0V
21	0V
22	0V
23	4.86V
24	0V
25	0V
26	0V
27	4.86V
28	4.86V
29	0V
30	0V
31	0V
32	4.86V
33	0V
34	0V
35	2.5V
36	10.3V

IC651	
PIN NO.	VOLTAGE
1	2.8V
2	0V
3	0V
4	0V
5	0V
6	0V
7	-
8	0V
9	0V
10	0V

IC703	
PIN NO.	VOLTAGE
1	0V
2	0V
3	0V
4	0V
5	0V
6	0V
7	0V
8	0.95V
9	0V
10	0V
11	0V
12	0V
13	2.35V
14	0V
15	0V
16	0V
17	-2.65V
18	0V
19	0V
20	2.51V
21	0.83V
22	0V
23	0V
24	0V

IC771	
PIN NO.	VOLTAGE
1	1.26V
2	0V
3	0V
4	2.5V
5	2.8V

IC801	
PIN NO.	VOLTAGE
1	0V
2	0.24V
3	0V
4	0V
5	0.73V
6	0.73V

IC841	
PIN NO.	VOLTAGE
1	0V
2	4.96V
3	4.92V
4	0V
5	2.35V

IC842	
PIN NO.	VOLTAGE
1	4.88V
2	4.88V
3	4.93V
4	0V
5	0V
6	0V
7	4.5V
8	4.93V

IC850	
PIN NO.	VOLTAGE
1	1.25V
2	0.9V
3	1.22V
4	1.2V
5	1.17V
6	0V
7	0.64V
8	4.8V
9	0V
10	0.4V
11	1V
12	1V

IC901	
PIN NO.	VOLTAGE
1	0V
2	0V
3	0V
4	0V
5	0V
6	0V
7	1V
8	2V
9	2V
10	0V
11	2.5V
12	0.67V
13	0V
14	2.34V
15	0V
16	2.5V
17	0.57V
18	0V
19	0V
20	0V

• The numbers ① to ⑮ are waveform numbers shown in page 40.

7	8	9	10	11	12
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Figure 33 SCHEMATIC DIAGRAM (4/4)



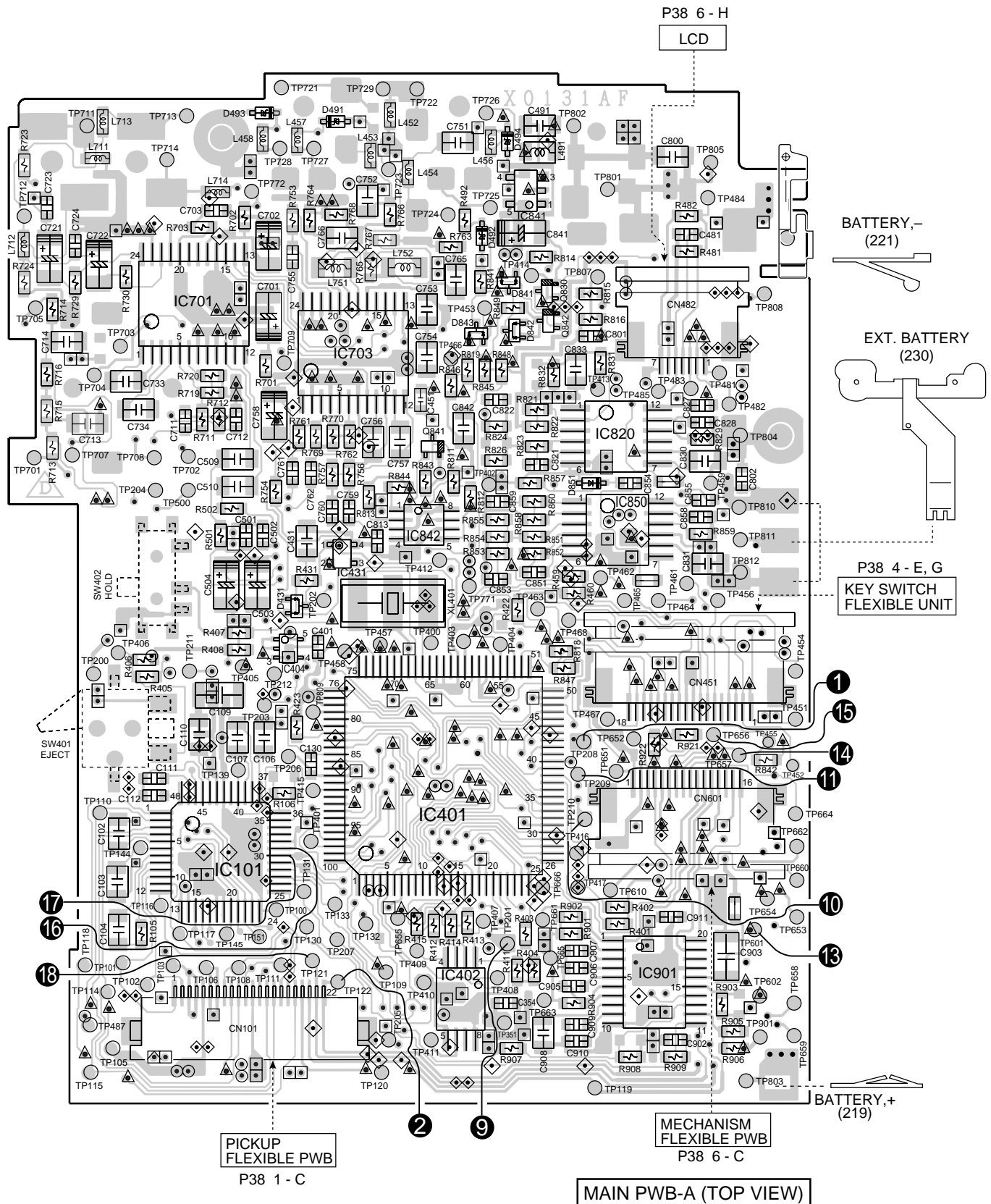
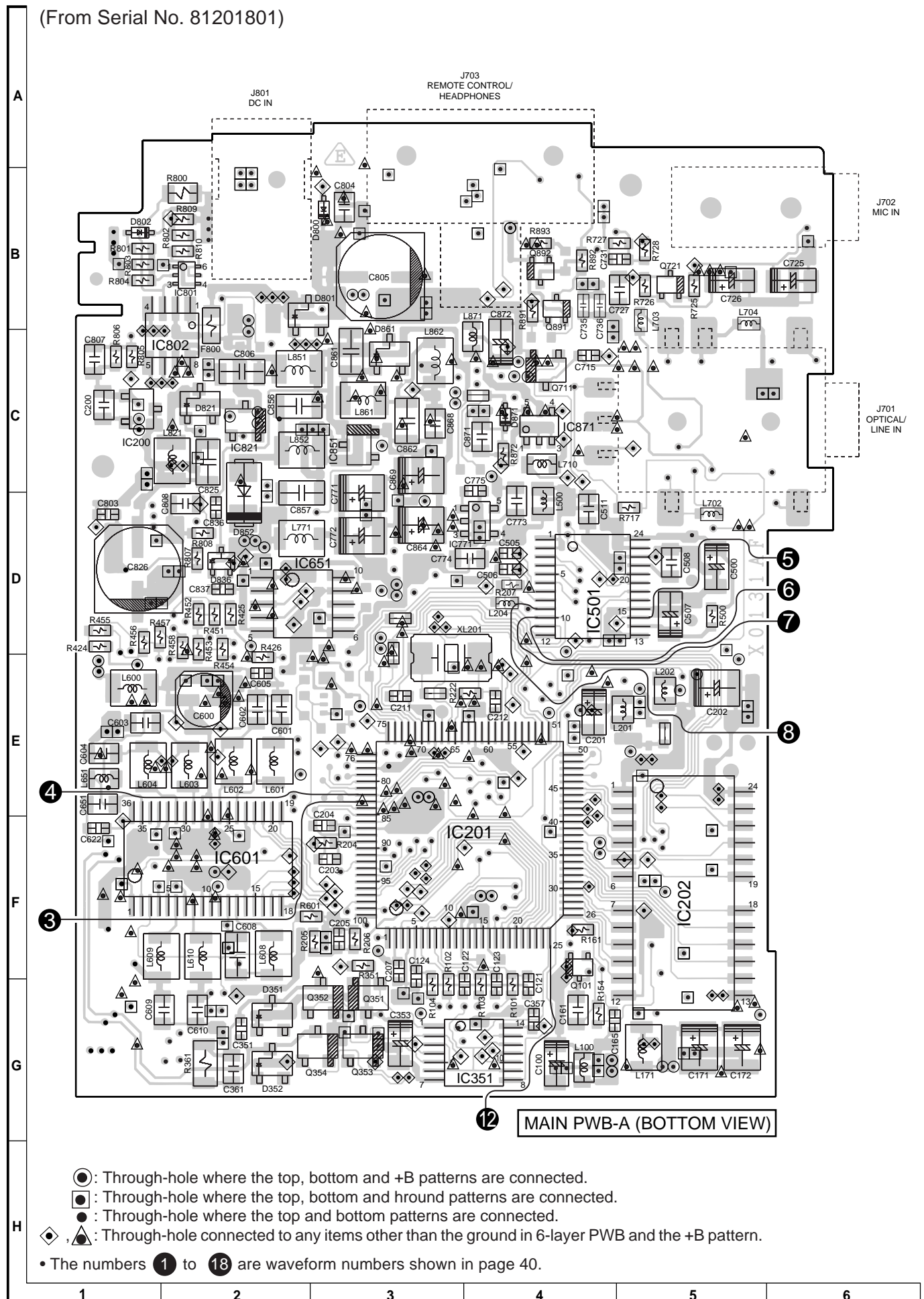


Figure 35 WIRING OF P.W.BOARD (2/5)

(From Serial No. 81201801)



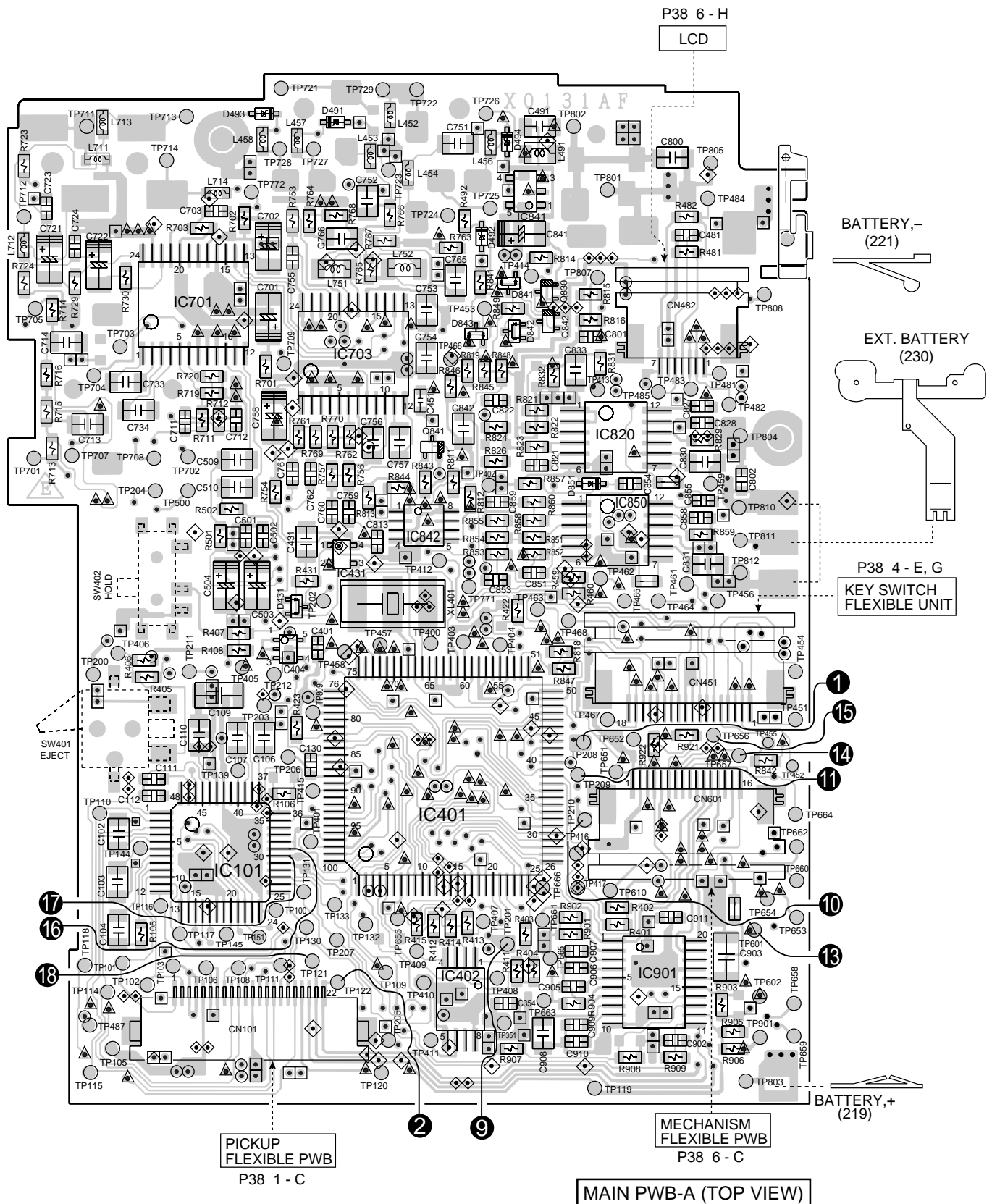


Figure 37 WIRING OF P.W.BOARD (4/5)

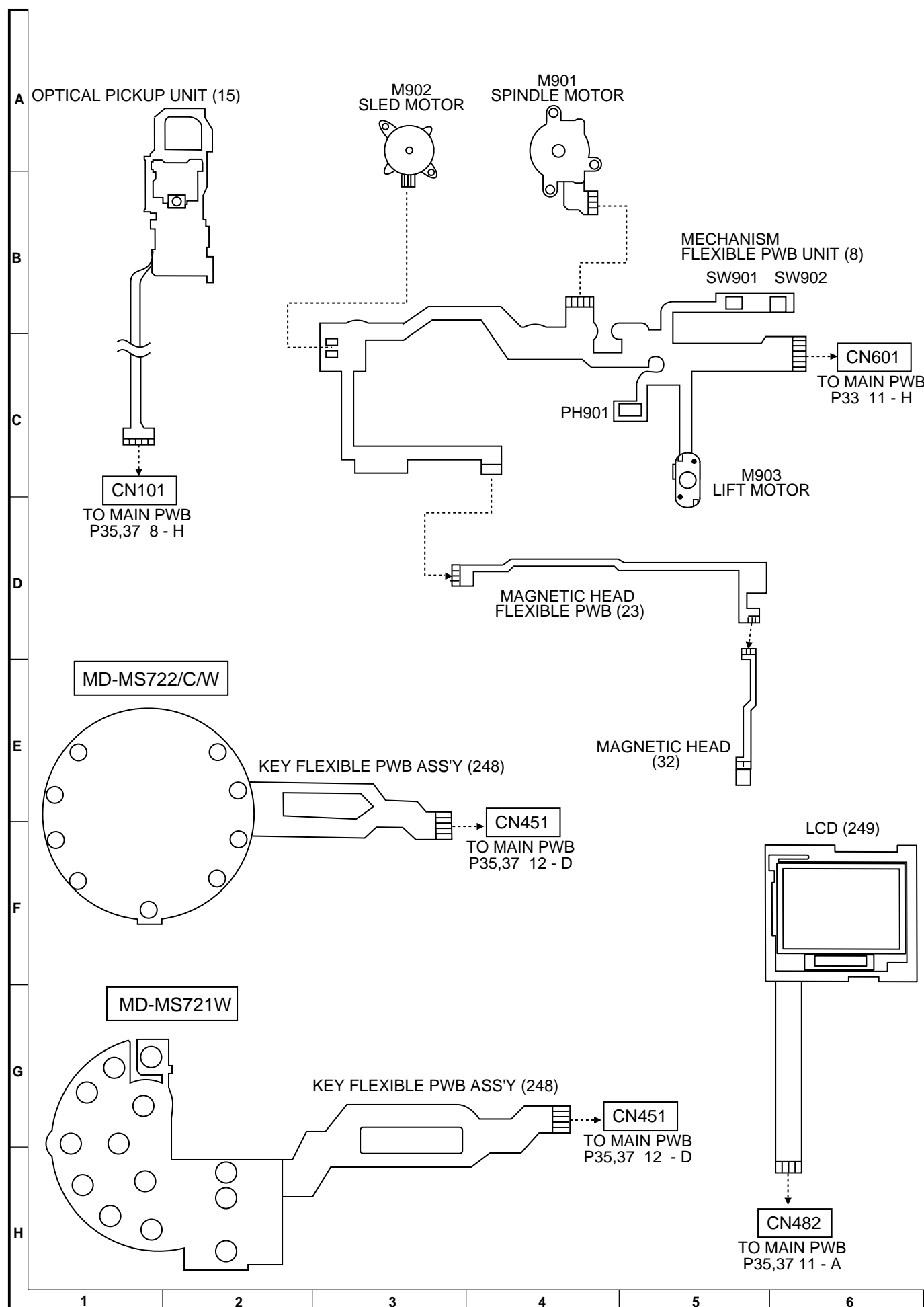


Figure 36 WIRING OF P.W.BOARD (5/5)

NOTES ON SCHEMATIC DIAGRAM

- Resistor:

To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with "Fusible" is a fuse type.

- Capacitor:

To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression "capacitance/withstand voltage" is used.

(CH), (TH), (RH), (UJ): Temperature compensation

(ML): Mylar type

- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.

- Parts marked with "△" (□ = □) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

REF. NO	DESCRIPTION	POSITION
SW401	EJECT	OFF—ON
SW402	HOLD	OFF—ON
SW901	DISC IN	OFF—ON
SW902	DISC PROTECT	OFF—ON

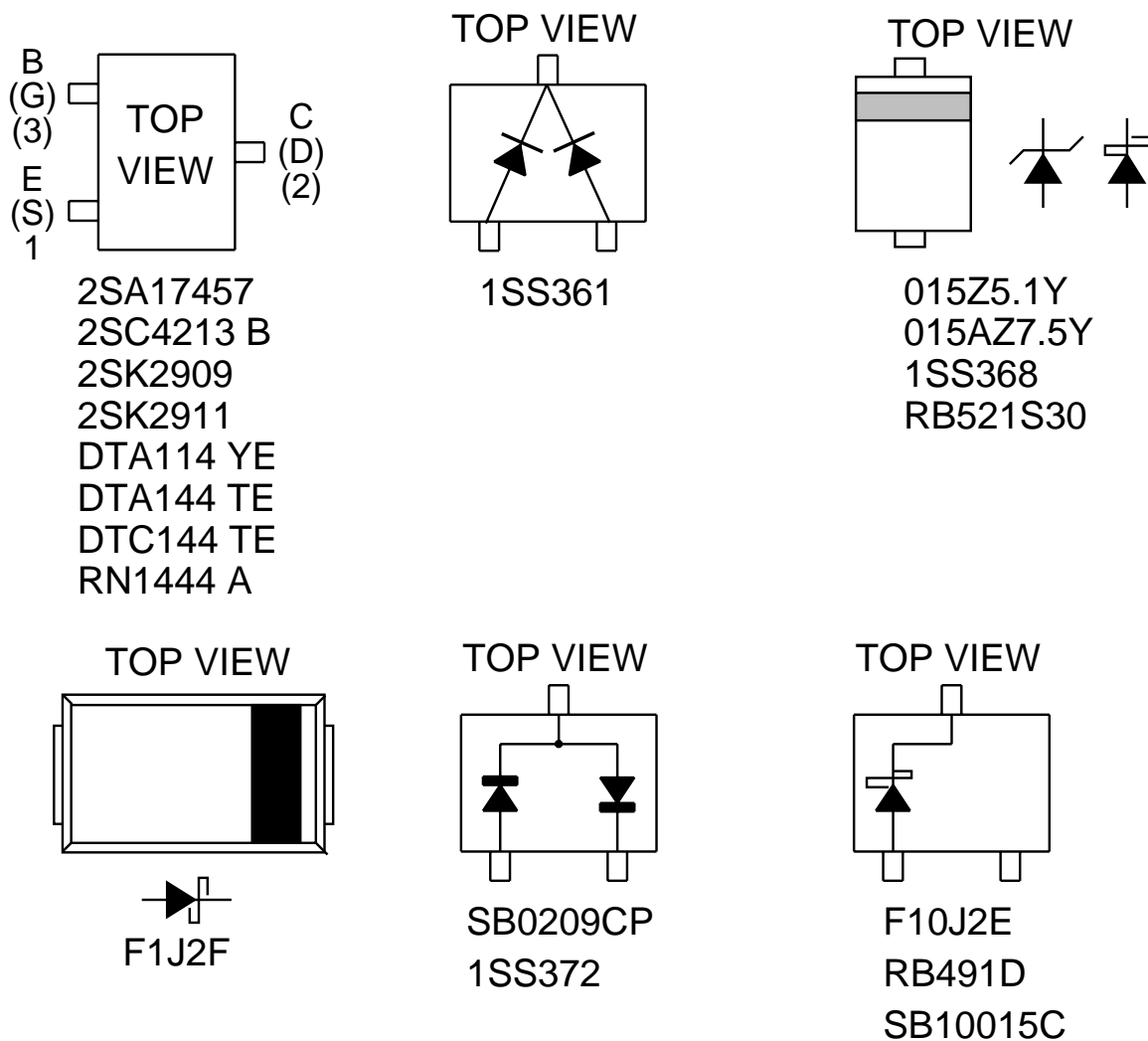
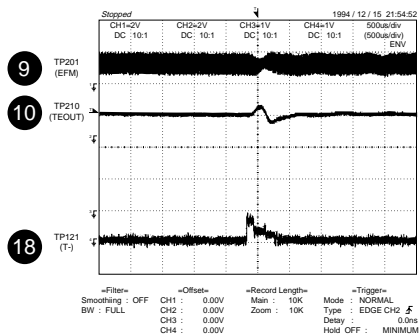
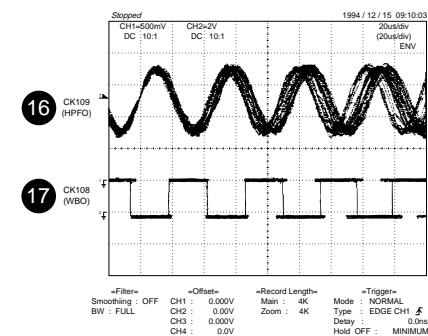
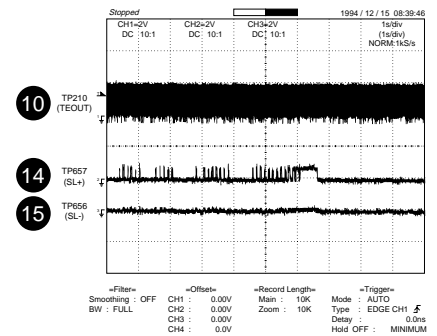
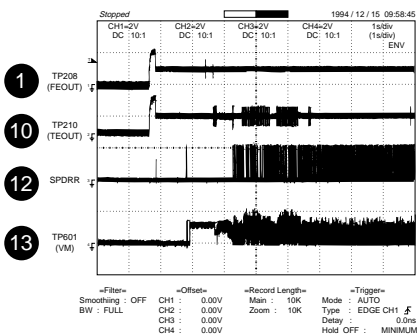
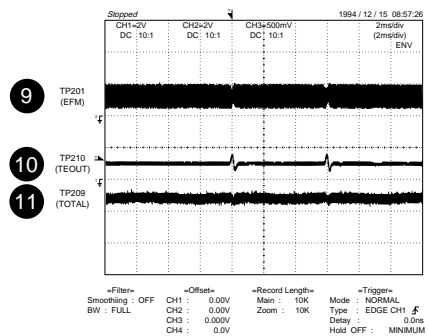
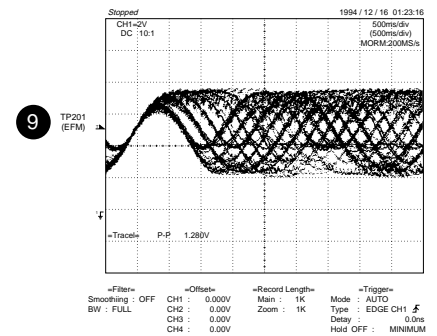
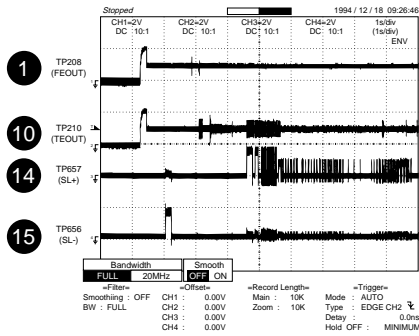
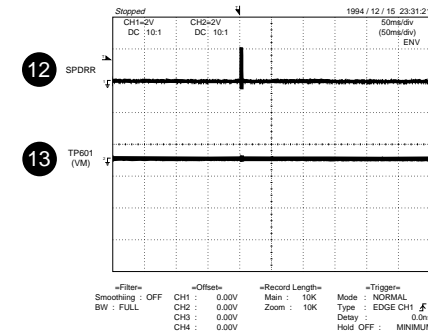
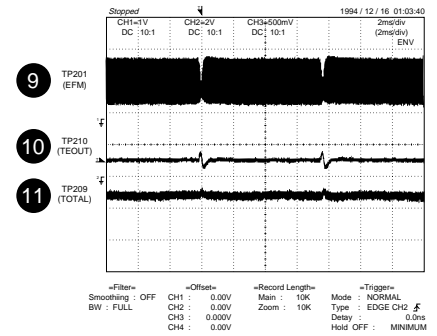
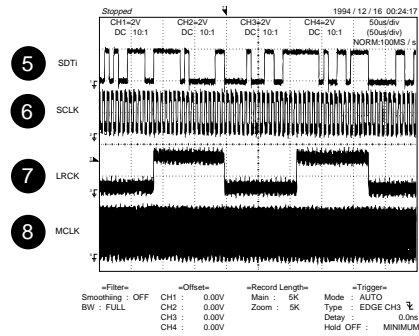
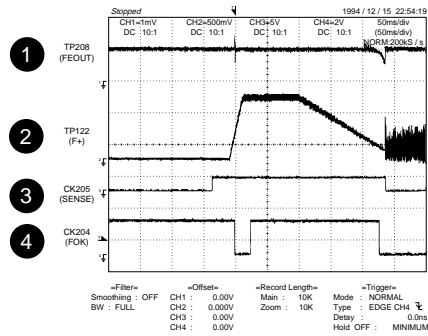


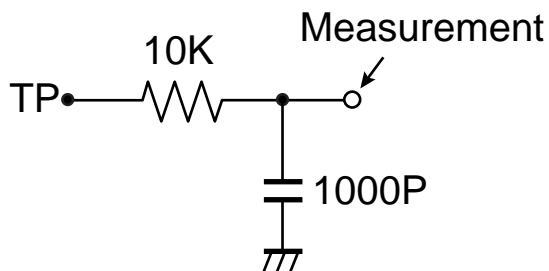
Figure 39 TYPES OF TRANSISTOR AND DIODE

WAVEFORMS OF MD CIRCUIT



For TP208, TP209, and TP210, use the specific LPF, and observe the waveform.

When watching the EEM monitor (TP201) Set MSL from 00H to 80H with EEPROM control setting. After completion restore 00H.



TROUBLESHOOTING

It is advisable to use the TEST mode (refer to Error Data Display Mode, P13) indicating the causes of troubles before starting repair. Causes of operation errors (up to 10 errors) are recorded as error codes. This information is useful for repair.

When does not function

When the CD section does not operate When the objective lens of the optical pickup is dirty, this section may not operate. Clean the objective lens, and check the playback operation. When this section does not operate even after the above step is taken, check the following items.

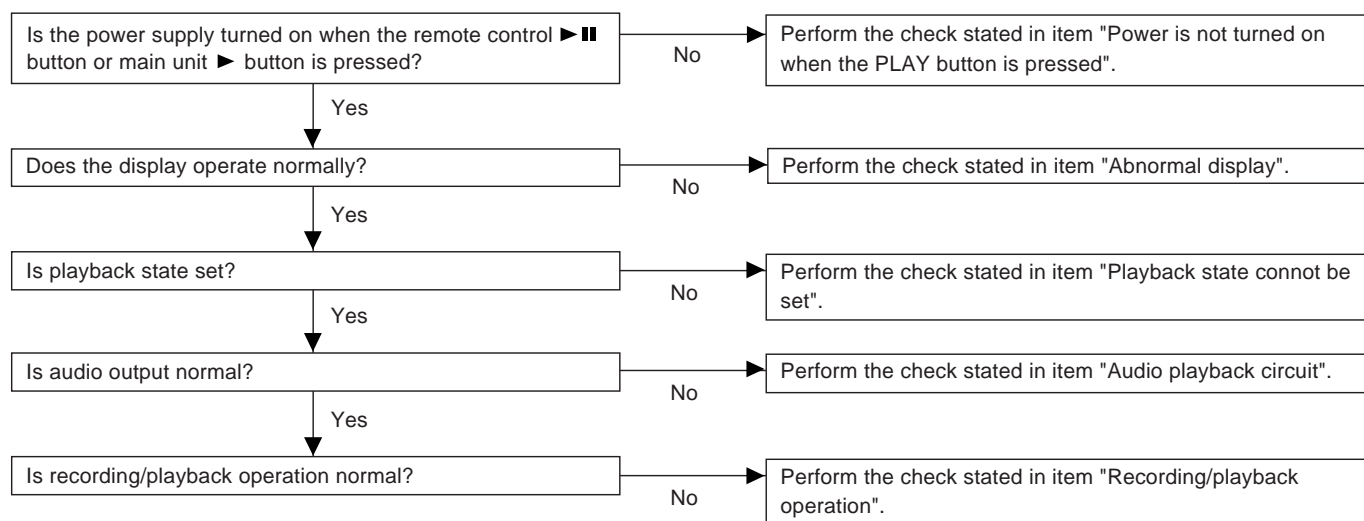
Remove the cabinet and follow the troubleshooting instructions.

"Track skipping and/or no TOC (Table Of Contents) may be caused by build up of dust or other foreign matter on the laser pickup lens. Before attempting any adjustment make certain that the lens is clean. If not, clean it as mentioned below."

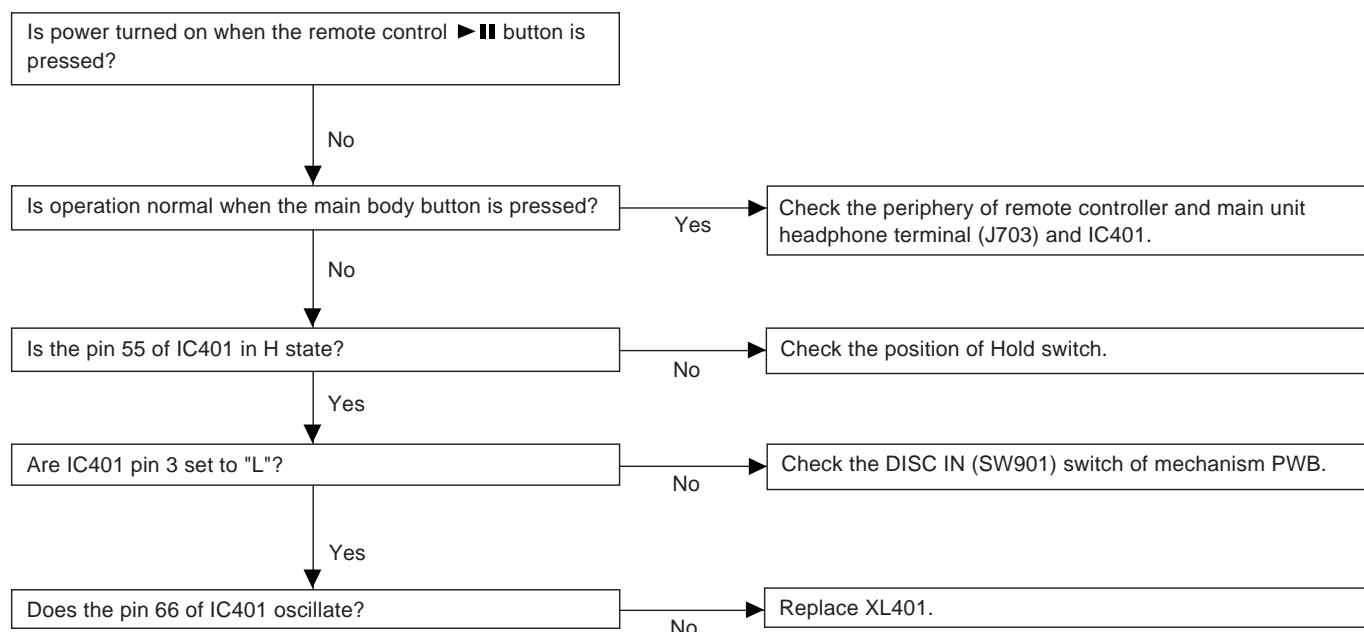
Turn the power off.

Gently clean the lens with a lens cleaning tissue and a small amount of isopropyl alcohol.

Do not touch the lens with the bare hand.

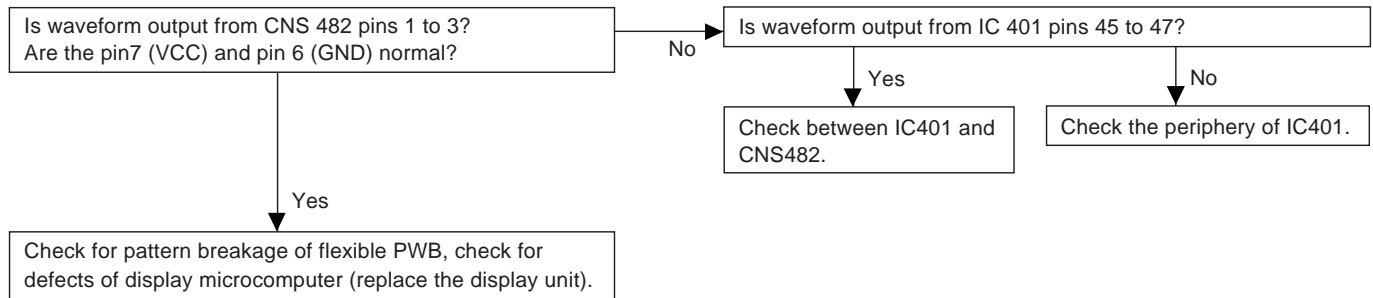


• Power is not turned on when the ► / ►|| button is pressed.



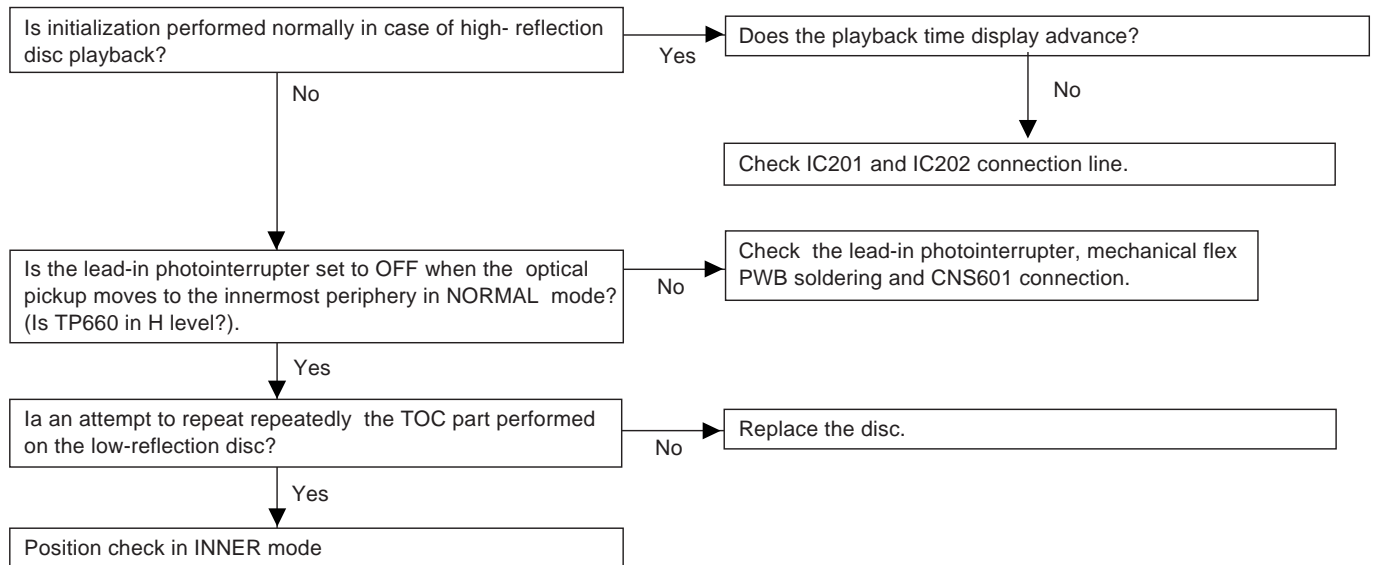
MD-MS722/C/WMS721W

• Abnormal display



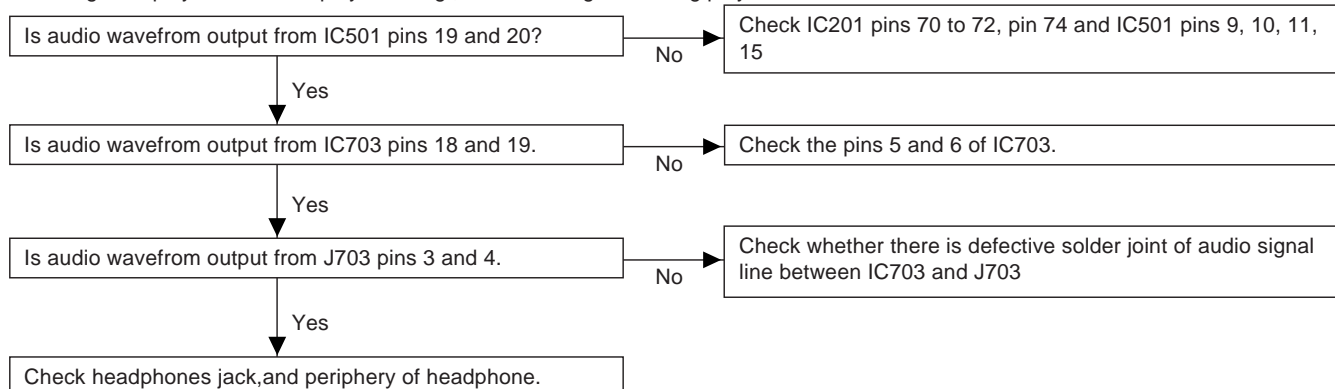
• Playback state cannot be set

When it has been ascertained that the address up to cluster address is normal in the TEST mode.

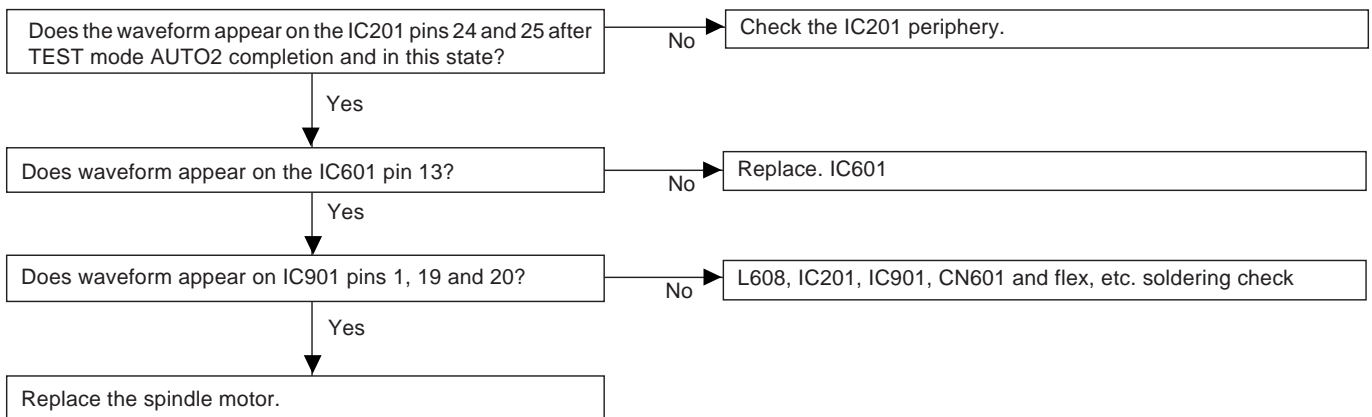


• Audio playback circuit

Although the playback time display is acting., no sound is given during playback in the normal mode.

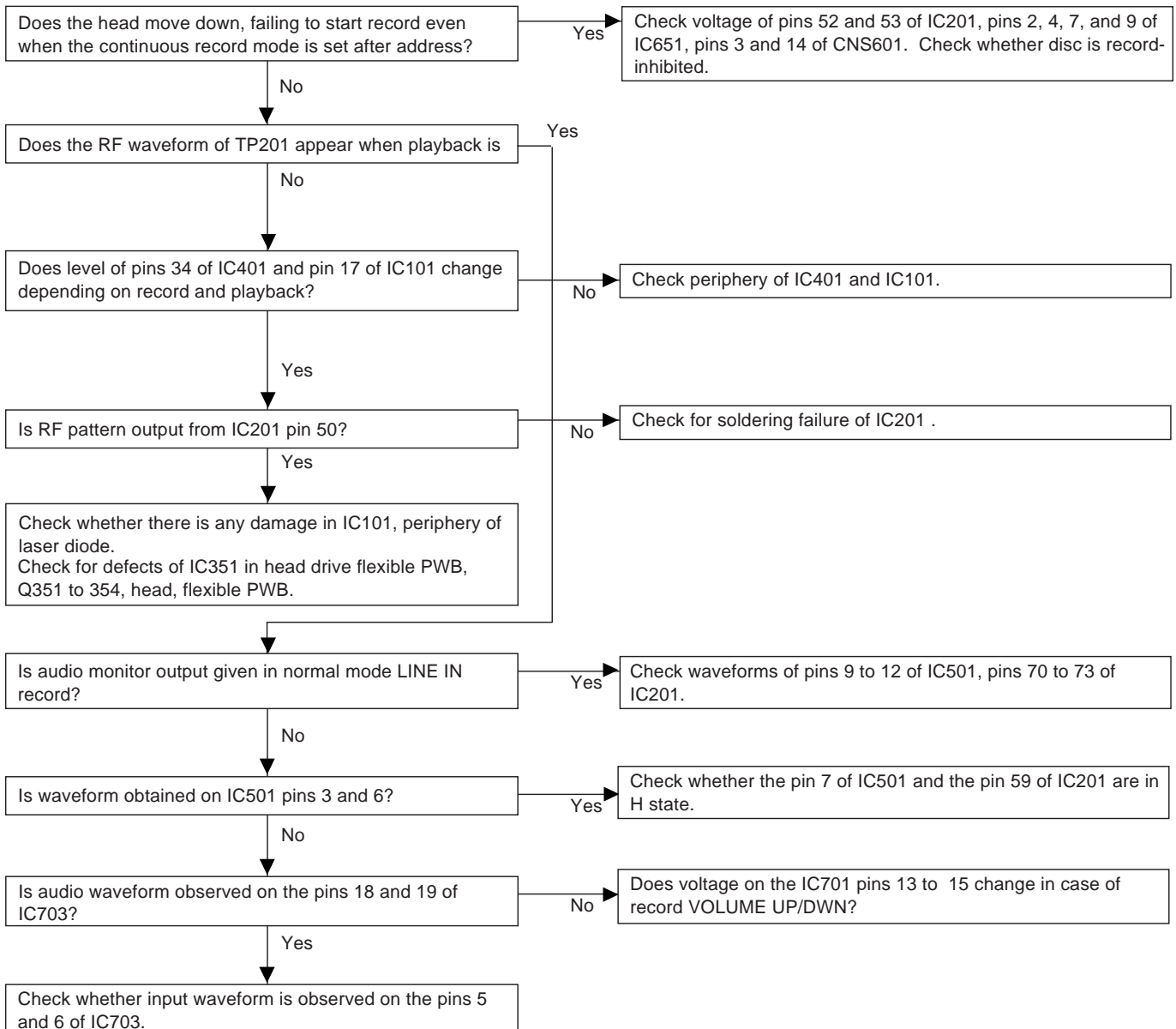


• The spindle motor fails to run.Does the head move



• Recording/playback operation

Insert a low reflection disc, and ascertain audio output by normal playback, and then set TEST REC mode.



FUNCTION TABLE OF IC

IC401 RH-iX2772AF03(IX2772AF):System Microcomputer (1/2)

Pin No.	Port Name	Terminal Name	Input/Output	Function
1	P12/TCLKA	CIN	Input	Track cross signal/focus drive detection
2	P13	SPIN	Output	Spindle motor FG pulse detection input
3	P14	DISCIN	Input	Disc insertion detection input
4	P15	DISCCPR	Input	Disc record inhibition switch input
5*	TIOCA2	SPWDS	Input	Spindle motor FG pulse width detection
6	P17	PDCNT	Output	Inner detection PD current control output
7	Vss	VSS	—	Ground potential
8	TxD0	RMDAT	Output	Remote control indication data output
9	TxD1	DSPDAT	Output	Unit indication data output
10	P32	DSPSTB	Output	Unit indication strobe output
11*	P33	P33	Output	Spare
12*	SCK0	SCK0	Output	Serial IO clock output (not used)
13	SCK1	DSPSCK	Output	Unit indication data clock output
14	PE0	_EPCS	Output	EEPROM chip selection output
15	PE1	EEPD	Input/Output	EEPROM serial data input/output
16	PE2	EEPK	Output	EEPROM serial clock output
17	PE3	PHOLD	Output	System power ON holding output when battery is used
18	Vss	VSS	—	Ground potential
19	PE4	PCNT1	Output	Vref supply control output of power IC
20	PE5	SYRS	Output	System LSI register selection output
21	PE6	_SYRD	Output	System LSI read enable output
22	PE7	_SYWR	Output	System LSI write enable output
23-30	PD0-PD7	SYD0-SYD7	Input/Output	System LSI parallel data bus
31	Vss	VSS	—	Ground potential
32	PC0	PCLAT	Output	Record audio IC data latch output
33	PC1	_MCPGI	Input	Microphone plug insertion detection input
34	PC2	_INPGI	Input	Line/digital plug insertion detection
35	PC3	INPGCK	Input	Line/digital plug type detection
36	PC4	RPCNT	Output	Record circuit power control output
37	PC5	TEST1	Input	Test mode setting input 1
38	PC6	TEST0	Input	Test mode setting input 0
39	PC7	JPNP	Input	Kana conversion/Kana input existence/nonexistence discrimination
40	Vcc	VCC	—	Positive power supply
41*	PB0	PB0	Output	Spare
42	PB1	_ELONH	Output	Remote control EL'H' lighting control output
43*	PB2	PB2	Output	Spare
44	PB3	LDON	Output	P.U. laser ON/OFF control output
45	PB4	OPICGA	Output	P.U. detection sensitivity selection output
46	PB5	RFLAT	Output	RF amplifier IC data latch output
47	PB6	RACLK	Output	RF/Audio IC data clock output
48	PB7	_ELONL	Input/Output	Remote control EL 'L' lighting control output
49	Vss	VSS	—	Ground potential
50	PA0	RADAT	Output	RF/Audio IC serial data output
51	PA1	PBLAT	Output	Audio IC data latch output
52	PA2	REC	Input	Unit REC key operation detection input
53	PA3	PBOPON	Output	Audio IC output stage control output
54	P20	RPLAY	Input	Remote control PLAY key operation detection input
55	P21	_KHOLD	Input	Unit key hold switch input
56	TIOCC3	BUZOUT	Output	Beep sound pulse output
57	MD0	MD0	Input	Operation mode selection input 0

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC401 RH-IX2772AF03(IX2772AF):System Microcomputer (2/2)

Pin No.	Port Name	Terminal Name	Input/Output	Function
58	MD1	MD1	Input	Operation mode selection input 1
59	P23	INNSW	Input	Mechanism inner SW position detection input
60*	WDTOVF	WDTOVF	Output	Watch dog timer (not used)
61	MD2	MD2	Input	Operation mode selection input 2
62	RES	_RESET	Input	Microcomputer hard reset input
63	NMI	_NMI	Input	Nonmaskable interruption (not used)
64	STBY	_STBY	Input	Microcomputer standby input (not used)
65	Vcc	VCC	—	Positive power supply
66	XTAL	XTAL	—	Crystal connection terminal
67	EXTAL	EXTAL	—	Crystal connection terminal
68	Vss	VSS	—	Ground potential
69	PF7	_STOP	Input	Unit STOP key operation detection input
70	PF6	PLAY	Input	Unit PLAY key operation detection input
71	PF5	EMPHO	Output	Audio emphasis control output 0
72	PF4	JOG0	Input	Jog encoder input 0
73	PF3	JOG1	Input	Jog encoder input 1
74*	PF2	PF2	Output	Spare
75*	PF1/IRQ1	_IRQ1	Output	Software standby return request
76	IRQ0	_DINT	Input	System LSI interruption request input
77	AVcc	AVCC	—	A/D and D/A converter positive power supply
78	Vref	VREF	—	A/D and D/A converter reference voltage
79	AN0	PLVDRY	Input	Dry battery voltage detection input
80	AN1	PLVDCI	Input	DC jack voltage detection input
81	AN2	PLVINN	Input	Lithium battery voltage detection input
82	AN3	RKEY	Input	Remote control key operation detection input
83	AN4	HKEY1	Input	Unit key operation detection input 1
84	AN5	HKEY2	Input	Unit key operation detection input 2
85	AN6	TEMP	Input	Ambient temperature detection input
86	DA1	LDVAR	Output	P.U. laser power setting output
87	AVss	AVSS	—	A/D and D/A converter ground potential
88	Vss	VSS	—	Ground potential
89	P24	START	Input	Disc insertion start-up detection input
90	TIOCB4	MCMON	Output	Internal operation status monitor output
91*	P26	P91	Output	Spare
92	P27	DCNT1M	Output	Mechanism driver enable output
93	PG0	SENSE	Input	System LSI servo sense input
94	PG1	_FOK	Input	Focus OK signal input
95	PG2	_XRST	Output	System LSI hard reset output
96	PG3	CKSTP	Output	Microcomputer sleeve operation monitor output
97	PG4	EJSW	Input	Ejection lever operation detection input
98	Vcc	VCC	—	Positive power supply
99	P10	PCNT2	Output	Vcc supply control output of power IC
100	P11	HDON	Output	Recording head current control output

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

MD-MS722/C/WMS721W

— M E M O —

SHARP PARTS GUIDE

MODEL **MD-MS722**
MD-MS722C
MD-MS722W
MD-MS721W(BL)
MD-MS721W(S)

“HOW TO ORDER REPLACEMENT PARTS”

To have your order filled promptly and correctly, please furnish the following information.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. No. |
| 3. PART NO. | 4. DESCRIPTION |

★ MARK: SPARE PARTS-DELIVERY SECTION

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Contact your nearest SHARP Parts Distributor to order.

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Please call Toll-Free;
1-800-BE-SHARP

Explanation of capacitors/resistors parts codes

Capacitors

VCC Ceramic type
 VCK Ceramic type
 VCT Semiconductor type
 VC •• MF Cylindrical type (without lead wire)
 VC •• MN Cylindrical type (without lead wire)
 VC •• TV Square type (without lead wire)
 VC •• TQ Square type (without lead wire)
 VC •• CY Square type (without lead wire)
 VC •• CZ Square type (without lead wire)
 VC J .. The 13th character represents capacity difference.
 ("J" $\pm 5\%$, "K" $\pm 10\%$, "M" $\pm 20\%$, "N" $\pm 30\%$,
 "C" ± 0.25 pF, "D" ± 0.5 pF, "Z" $\pm 80-20\%$.)


If there are no indications for the electrolytic capacitors, error is $\pm 20\%$.

Resistors

VRD Carbon-film type
 VRS Carbon-film type
 VRN Metal-film type
 VR •• MF Cylindrical type (without lead wire)
 VR •• MN Cylindrical type (without lead wire)
 VR •• TV Square type (without lead wire)
 VR •• TQ Square type (without lead wire)
 VR •• CY Square type (without lead wire)
 VR •• CZ Square type (without lead wire)
 VR J .. The 13th character represents error.
 ("J" $\pm 5\%$, "F" $\pm 1\%$, "D" $\pm 0.5\%$.)

If there are no indications for other parts, the resistors are $\pm 5\%$ carbon-film type.

NOTE:

Parts marked with “” are important for maintaining the safety of the set.
 Be sure to replace parts with specified ones for maintaining the safety and performance of the set.

MD-MS722/C/W/MS721W

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
INTEGRATED CIRCUITS				
IC101	VHIIR3R55//1	J	AQ	RF Signal, Processor, IR3R55
IC200	VHI62FP2002-1	J	AE	2V Regulator, 62FP2002
IC201	VHILR37811//1	J	BB	ENDEC LSI, LR37811
IC202	RH-IX2723AFZZ	J	BC	16Bit D-RAM, IX2723AF
IC351	VHI74ACT02T-1	J	AE	Head Driver, 74ACT02T
IC401	RH-IX2772AF03	J	AW	System Microcomputer, IX2772AF (Only Serial No.811xxxxx)
IC401	RH-IX2772AF04	J	AW	System Microcomputer, IX2772AF (From Serial No.812xxxxx)
IC402	VHIS29L294A-1	J	AH	EE-PROM, S29L294A
IC404	VHI7SH00FU/-1	J	AE	NAND Gate, 7SH00FU
IC431	VHIS80820LN-1	J	AD	Reset, S80820LN
IC501	VHIAK4519VF-1	J	AQ	AD/DA Converter, AK4519VF
IC601	VHI17A39TD/-1	J	AP	PWM Driver, 17A39TD
IC651	VHILB1930M/-1	J	AH	Motor Driver, LB1930M
IC701	VHIIR3R54N/-1	J	AQ	Audio Amp., IR3R54N
IC703	VHIIR3R54N/-1	J	AQ	Audio Amp., IR3R54N
IC771	VHITK71225M-1	J	AE	2.5V Regulator, TK71225M
IC801	VHIHN1C03FU-1	J	AD	Constant Current Drive, HN1C03FU
IC802	VHINDH8304P-1	J	AH	Power Select Charge Drive, NDH8304P
IC820	VHIIR3M09N/-1	J	AL	Power Drive, IR3M09N
IC821	VHICPH3303/-1	J	AE	P-ch MOS FET, CPH3303
IC841	VHIXC62HS02-1	J	AE	Power Supply Microcomputer, XC62HS02
IC842	VHI7WH123FU-1	J	AF	C-MOS Logic, 7WH123FU
IC850	VHIIR3M09N/-1	J	AL	Power Drive, IR3M09N
IC851	VHICPH3403/-1	J	AE	N-ch MOS FET, CPH3403
IC871	VHITK71345M-1	J	AE	4.5V Regulator (ON/OFF), TK71345M
IC901	VHIBA6965AF-1	J	AM	3-Phase Brush Leess Driver, BA6965AF
TRANSISTORS				
Q101	VS2SA17457/-1	J	AB	Silicon, PNP, 2SA17457
Q351	VS2SK2909//1	J	AE	FET, 2SK2909
Q352	VS2SK2911//1	J	AE	FET, 2SK2911
Q353	VS2SK2909//1	J	AE	FET, 2SK2909
Q354	VS2SK2911//1	J	AE	FET, 2SK2911
Q711	VSRN1444A//1	J	AC	Digital, NPN, RN1444 A
Q721	VS2SC4213B/-1	J	AC	Silicon, NPN, 2SC4213 B
Q830	VSDTC144TE/-1	J	AC	Digital, NPN, DTC144 TE
Q841	VSDTA144TE/-1	J	AB	Digital, PNP, DTA144 TE
Q842	VSDTA114YE/-1	J	AC	Digital, PNP, DTA114 YE
Q891,892	VS2SA17457/-1	J	AB	Silicon, PNP, 2SA17457
DIODES				
D351,352	VHDSB0209CP-1	J	AC	Silicon, SB0209CP
D431	VHD1SS361//1	J	AB	Silicon, 1SS361
D491	VHE015Z5R1Y-1	J	AD	Zener, 5.1V, 015Z5.1Y
D492	VHE15AZ7R5Y-1	J	AC	Zener, 7.5V, 15AZ7.5Y
D493	VHE015Z5R1Y-1	J	AD	Zener, 5.1V, 015Z5.1Y
D494	VHE15AZ7R5Y-1	J	AC	Zener, 7.5V, 15AZ7.5Y
D800	VHD1SS368//1	J	AC	Silicon, 1SS368
D801	VHDSB10015C-1	J	AD	Silicon, SB10015C
D802	VHE015Z5R1Y-1	J	AD	Zener, 5.1V, 015Z5.1Y
D821	VHDF10J2E//1	J	AC	Silicon, F10J2E
D836	VHD1SS372//1	J	AD	Silicon, 1SS372
D841~843	VHD1SS361//1	J	AB	Silicon, 1SS361
D851	VHDRB521S30-1	J	AC	Silicon, RB521S30
D852	VHDF1J2F//1	J	AE	Silicon, F1J2F
D861	VHDF10J2E//1	J	AC	Silicon, F10J2E
D871	VHDRB521S30-1	J	AC	Silicon, RB521S30
PH901	VHPGP1S93K/-1	J	AF	Photo Interrupter, GP1S93K
COILS				
L100	VPBNN100M0000	J	AC	10 μH
L171	RCILC0356AFZZ	J	AC	10 μH
L201	VPCBM220K0000	J	AC	22 μH
L202	VPCBM101K0000	J	AC	100 μH
L204	RCILC0353AFZZ	J	AB	Tip Solid Induction, 100mA
L452	RCILC0352AFZZ	J	AB	Tip Impeder, 150mA
L453,454	RCILC0353AFZZ	J	AB	Tip Solid Induction, 100mA
L456~458	RCILC0353AFZZ	J	AB	Tip Solid Induction, 100mA

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
L491	VPBNN4R7M0000	J	AC	4.7 μH
L500	VPCBM220K0000	J	AC	22 μH
L600	RCILC0331AFZZ	J	AC	2.2 μH, Choke
L601~604	RCILC0358AFZZ	J	AC	4.7 μH, Choke
L608	RCILC0359AFZZ	J	AC	100 μH, Choke
L609,610	RCILC0358AFZZ	J	AC	4.7 μH, Choke
L651	VPBNNR47M0000	J	AC	0.47 μH
L702,703	RCILC0353AFZZ	J	AB	Tip Solid Induction, 100mA
L704	RCILC0352AFZZ	J	AB	Tip Impeder, 150mA
L710	VPBNNR47M0000	J	AC	0.47 μH
L711	RCILC0352AFZZ	J	AB	Tip Impeder, 150mA
L712~714	RCILC0353AFZZ	J	AB	Tip Solid Induction, 100mA
L751,752	RCILC0344AFZZ	J	AC	47 μH, Choke
L771	RCILC0358AFZZ	J	AC	4.7 μH, Choke
L821	RCILC0333AFZZ	J	AC	10 μH, Choke
L851	RCILC0332AFZZ	J	AC	4.7 μH, Choke
L852	RCILC0333AFZZ	J	AC	10 μH, Choke
L861	RCILC0332AFZZ	J	AC	4.7 μH, Choke
L862	RCILC0358AFZZ	J	AC	4.7 μH, Choke
L871	VPBNNR47M0000	J	AC	0.47 μH
VIBRATORS				
XL201	RCRSC0023AFZZ	J	AK	Crystal, 33.8688 MHz
XL401	RCRM-0199AFZZ	J	AD	Ceramic, 4.194 MHz
CAPACITORS				
C100	VCSAFA0JJ106M	J	AD	10 μF, 6.3V, Electrolytic, Tantalume
C102,103	RC-KZ1183AFZZ	J	AC	1 μF, 10V, Electrolytic
C104	VCKYTV1EB273K	J	AB	0.027 μF, 25V
C106	RC-KZ1204AFZZ	J	AB	0.22 μF, 10V, Electrolytic
C107	VCKYTV1EB123K	J	AB	0.012 μF, 25V
C109	RC-KZ1184AFZZ	J	AC	1 μF, 16V, Electrolytic
C110	RC-KZ1204AFZZ	J	AB	0.22 μF, 10V, Electrolytic
C111	VCKYCY1HB332K	J	AA	0.0033 μF, 50V
C112	VCKYCY1CB333K	J	AA	0.033 μF, 16V
C121,122	VCCCCY1HH271J	J	AA	270 pF (CH), 50V
C123,124	VCCSCY1HL391J	J	AA	390 pF, 50V
C130	VCKYCY1CB104K	J	AB	0.1 μF, 16V
C161	RC-KZ1183AFZZ	J	AC	1 μF, 10V, Electrolytic
C165	VCKYCY1CB333K	J	AA	0.033 μF, 16V
C171,172	VCSAFB0JJ336M	J	AE	33 μF, 6.3V, Electrolytic, Tantalume
C200	RC-KZ1183AFZZ	J	AC	1 μF, 10V, Electrolytic
C201	RC-KZ1184AFZZ	J	AC	1 μF, 16V, Electrolytic
C202	VCSATE0JJ476M	J	AD	47 μF, 6.3V, Electrolytic, Tantalume
C203	VCKYCY1CB104K	J	AB	0.1 μF, 16V
C204	VCKYCY1AB474K	J	AC	0.47 μF, 10V
C205	VCKYCY1CB104K	J	AB	0.1 μF, 16V
C207	VCKYCY1CB104K	J	AB	0.1 μF, 16V
C211	VCCCCY1HH5R0C	J	AA	5 pF (CH), 50V
C212	VCCCCY1HH8R0D	J	AA	8 pF (CH), 50V
C351	VCCCCY1HH470J	J	AA	47 pF (CH), 50V
C353	VCSAFA0JJ106M	J	AD	10 μF, 6.3V, Electrolytic, Tantalume
C354	VCKYCY1CB104K	J	AB	0.1 μF, 16V
C357	VCKYCY1CB104K	J	AB	0.1 μF, 16V
C361	VCKYTV1HB393K	J	AB	0.039 μF, 50V
C401	VCKYCY1CB104K	J	AB	0.1 μF, 16V
C431	RC-KZ1206AFZZ	J	AC	0.47 μF, 10V
C442	VSCAPR0JJ106M	J	J	10 μF, 6.3V, Electrolytic, Tantalume (Only Serial No.81101800)
C451	VCKYCY1HB102K	J	AA	0.001 μF, 50V
C481	VCKYCY1CB104K	J	AB	0.1 μF, 16V
C491	RC-KZ1182AFZZ	J	AB	0.1 μF, 16V, Electrolytic
C500	VCSATA0JJ106M	J	AD	10 μF, 6.3V, Electrolytic, Tantalume
C501,502	VCKYCY1HB222K	J	AA	0.0022 μF, 50V
C503,504	VCSATA1AJ335M	J	AB	3.3 μF, 10V, Electrolytic, Tantalume
C505,506	VCKYCY1HB102K	J	AA	0.001 μF, 50V
C507	VCSATA0JJ106M	J	AD	10 μF, 6.3V, Electrolytic, Tantalume
C508	RC-KZ1183AFZZ	J	AC	1 μF, 10V, Electrolytic
C509,510	VCKYTV1CF225Z	J	AC	2.2 μF, 16V
C511	RC-KZ1183AFZZ	J	AC	1 μF, 10V, Electrolytic
C600	VCEAPW0JW226M	J	AC	22 μF, 6.3V, Electrolytic
C601~604	RC-KZ1183AFZZ	J	AC	1 μF, 10V, Electrolytic

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
C605	VCKYCY1CB104K	J	AB	0.1 μF,16V
C608	RC-KZ1186AFZZ	J	AD	3.3 μF,10V,Electrolytic
C609,610	RC-KZ1183AFZZ	J	AC	1 μF,10V,Electrolytic
C622	VCKYCY1CB104K	J	AB	0.1 μF,16V
C651	VCKYTV1CF105Z	J	AB	1 μF,16V
C701,702	VCSATA0JJ106M	J	AD	10 μF,6.3V,Electrolytic, Tantalume
C703	VCKYCY1EB103K	J	AA	0.01 μF,25V
C711,712	VCCCCY1HH101J	J	AA	100 pF (CH),50V
C713,714	RC-KZ1183AFZZ	J	AC	1 μF,10V,Electrolytic
C715	VCKYCY1CB104K	J	AB	0.1 μF,16V
C721,722	VCSATA1AJ335M	J	AB	3.3 μF,10V,Electrolytic, Tantalume
C723,724	VCKYCY1HB102K	J	AA	0.001 μF,50V
C725,726	VCSATA1AJ335M	J	AB	3.3 μF,10V,Electrolytic, Tantalume
C727	VCKYTV1CF105Z	J	AB	1 μF,16V
C731	VCKYCY1CF224Z	J	AB	0.22 μF,16V
C733,734	RC-KZ1182AFZZ	J	AB	0.1 μF,16V,Electrolytic
C735	VCKYCY1HB102K	J	AA	1000 pF,50V
C736	VCCCCY1HH101J	J	AA	100 pF (CH),50V
C751,752	VCKYTV1CB823K	J	AB	0.082 μF,16V
C753,754	VCKYTV1CF105Z	J	AB	1 μF,16V
C755	VCKYCY1EB103K	J	AA	0.01 μF,25V
C756,757	VCKYTV1AB684K	J	AC	0.68 μF,10V
C758	VCSATA1AJ335M	J	AB	3.3 μF,10V,Electrolytic, Tantalume
C759,760	VCKYCY1CB273K	J	AA	0.027 μF,16V
C761,762	VCKYCY0JB105K	J	AC	1 μF,6.3V
C765,766	RC-KZ1204AFZZ	J	AB	0.22 μF,10V,Electrolytic
C771,772	VCSATE0JJ476M	J	AD	47 μF,6.3V,Electrolytic, Tantalume
C773	RC-KZ1204AFZZ	J	AB	0.22 μF,10V,Electrolytic
C774	VCKYTV1CF105Z	J	AB	1 μF,16V
C775	VCKYCY1EB103K	J	AA	0.01 μF,25V
C800	RC-KZ1183AFZZ	J	AC	1 μF,10V,Electrolytic
C801	VCKYCY1CB104K	J	AB	0.1 μF,16V
C802	VCKYCY0JB105K	J	AC	1 μF,6.3V
C803	VCKYCY1CB104K	J	AB	0.1 μF,16V
C804	RC-KZ1183AFZZ	J	AC	1 μF,10V,Electrolytic
C805	VCEAPW0JW107M	J	AD	100 μF,6.3V,Electrolytic
C806	RC-KZ1186AFZZ	J	AD	3.3 μF,10V,Electrolytic
C807	VCKYTV1EB103K	J	AA	0.01 μF,25V
C808	RC-KZ1182AFZZ	J	AB	0.1 μF,16V,Electrolytic
C813	VCKYCY1CB104K	J	AB	0.1 μF,16V
C821	VCCCCY1HH680J	J	AA	68 pF (CH),50V
C822	VCCCCY1HH8R0D	J	AA	8 pF (CH),50V
C825	RC-KZ1186AFZZ	J	AD	3.3 μF,10V,Electrolytic
C826	VCEAPW0GW227M	J	AD	220 μF,6.3V,Electrolytic (From Serial No.81201801)
C826	VCEAPW0JW107M	J	AD	100 μF,6.3V,Electrolytic (Only Serial No.81101800)
C827,828	VCCCCY1HH101J	J	AA	100 pF (CH),50V
C830,831	RC-KZ1183AFZZ	J	AC	1 μF,10V,Electrolytic
C833	RC-KZ1205AFZZ	J	AB	0.33 μF,10V
C836,837	VCKYCY1CB104K	J	AB	0.1 μF,16V
C841	VCSAFA0JJ106M	J	AD	10 μF,6.3V,Electrolytic, Tantalume (From Serial No.81201801)
C841	VCSATA0JJ226M	J	J	22 μF,6.3V,Electrolytic, Tantalume (Only Serial No.81101800)
C842	RC-KZ1183AFZZ	J	AC	1 μF,10V,Electrolytic
C851	VCCCCY1HH680J	J	AA	68 pF (CH),50V
C853	VCCCCY1HH100D	J	AA	10 pF (CH),50V
C854	VCKYCY1EB103K	J	AA	0.01 μF,25V
C855	VCCCCY1HH101J	J	AA	100 pF (CH),50V
C856	RC-KZ1184AFZZ	J	AC	1 μF,16V,Electrolytic
C857	VCKYTV0JB106K	J	AE	10 μF,6.3V
C858	VCCCCY1HH101J	J	AA	100 pF (CH),50V
C859	VCKYCY1HB102K	J	AA	0.001 μF,50V
C861,862	RC-KZ1184AFZZ	J	AC	1 μF,16V,Electrolytic
C864	VCSATE0JJ476M	J	AD	47 μF,6.3V,Electrolytic, Tantalume
C868	VCKYTV1CF105Z	J	AB	1 μF,16V
C869	VCSATE0JJ476M	J	AD	47 μF,6.3V,Electrolytic, Tantalume
C871	RC-KZ1183AFZZ	J	AC	1 μF,10V,Electrolytic
C872	VCSATA1AJ106M	J	AE	10 μF,10V,Electrolytic, Tantalume
C902	VCKYCY1EB103K	J	AA	0.01 μF,25V
C903	RC-KZ1186AFZZ	J	AD	3.3 μF,10V,Electrolytic
C905~907	VCKYCY1HB222K	J	AA	0.0022 μF,50V

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
C908	RC-KZ1204AFZZ	J	AB	0.22 μF,10V,Electrolytic
C909,910	VCKYCY1CB333K	J	AA	0.033 μF,16V
C911	VCKYCY1CB104K	J	AB	0.1 μF,16V
RESISTORS				
	VRS-CY1JB000J	J	AA	0 ohm, Jumper, 0.8×1.55mm, Green
R101~104	VRS-CY1JB223J	J	AA	22 kohms, 1/16W
R105	VRS-CY1JB394J	J	AA	390 kohms, 1/16W
R106	VRS-CY1JB563J	J	AA	56 kohms, 1/16W
R154	VRS-CY1JB122J	J	AA	1.2 kohms, 1/16W
R161	VRS-CY1JB122J	J	AA	1.2 kohms, 1/16W
R204	VRS-CY1JB102J	J	AA	1 kohm, 1/16W
R205	VRS-CY1JB684D	J	AA	680 kohms, 1/16W
R206	VRS-CY1JB274D	J	AA	270 kohms, 1/16W
R207	VRS-CY1JB681J	J	AA	680 ohms, 1/16W
R222	VRS-CY1JB105J	J	AA	1 Mohm, 1/16W
R351	VRS-CY1JB4R7J	J	AA	4.7 ohms, 1/16W
R361	VRS-TQ2BB150J	J	AA	15 ohms, 1/8W
R401,402	VRS-CY1JB104J	J	AA	100 kohm, 1/16W
R403	VRS-CY1JB102J	J	AA	1 kohm, 1/16W
R404	VRS-CY1JB104J	J	AA	100 kohm, 1/16W
R405	VRS-CY1JB103J	J	AA	10 kohm, 1/16W
R406	VRS-CY1JB104J	J	AA	100 kohm, 1/16W
R407	VRS-CY1JB103J	J	AA	10 kohm, 1/16W
R408	VRS-CY1JB104J	J	AA	100 kohm, 1/16W
R411	VRS-CY1JB104J	J	AA	100 kohm, 1/16W
R412	VRS-CY1JB103J	J	AA	10 kohm, 1/16W
R413~415	VRS-CY1JB102J	J	AA	1 kohm, 1/16W
R422	VRS-CY1JB104J	J	AA	100 kohm, 1/16W
R423	VRS-CY1JB223D	J	AA	22 kohms, 1/16W
R424,425	VRS-CY1JB223J	J	AA	22 kohms, 1/16W
R426	VRS-CY1JB223D	J	AA	22 kohms, 1/16W
R431	VRS-CY1JB334J	J	AA	330 kohms, 1/16W
R451	VRS-CY1JB562J	J	AA	5.6 kohms, 1/16W
R452	VRS-CY1JB822J	J	AA	8.2 kohms, 1/16W
R453	VRS-CY1JB183J	J	AA	18 kohms, 1/16W
R454	VRS-CY1JB563J	J	AA	56 kohms, 1/16W
R455	VRS-CY1JB562J	J	AA	5.6 kohms, 1/16W
R456	VRS-CY1JB822J	J	AA	8.2 kohms, 1/16W
R457	VRS-CY1JB183J	J	AA	18 kohms, 1/16W
R458	VRS-CY1JB563J	J	AA	56 kohms, 1/16W
R459,460	VRS-CY1JB473J	J	AA	47 kohms, 1/16W
R481	VRS-CY1JB363D	J	AA	36 kohms, 1/16W
R482	VRS-CY1JB183D	J	AA	18 kohms, 1/16W
R492	VRS-CY1JB102J	J	AA	1 kohm, 1/16W
R500	VRS-CY1JB4R7J	J	AA	4.7 ohms, 1/16W
R501,502	VRS-CY1JB471J	J	AA	470 ohms, 1/16W
R601	VRS-CY1JB563J	J	AA	56 kohms, 1/16W
R701,702	VRS-CY1JB101J	J	AA	100 ohm, 1/16W
R703	VRS-CY1JB124J	J	AA	120 kohms, 1/16W
R711,712	VRS-CY1JB562J	J	AA	5.6 kohms, 1/16W
R713,714	VRS-CY1JB103J	J	AA	10 kohm, 1/16W
R715,716	VRS-CY1JB104J	J	AA	100 kohm, 1/16W
R717	VRS-CY1JB102J	J	AA	1 kohm, 1/16W
R719,720	VRS-CY1JB822J	J	AA	8.2 kohms, 1/16W
R723,724	VRS-CY1JB682J	J	AA	6.8 kohms, 1/16W
R725	VRS-CY1JB101J	J	AA	100 ohm, 1/16W
R726	VRS-CY1JB393J	J	AA	39 kohms, 1/16W
R727	VRS-CY1JB822J	J	AA	8.2 kohms, 1/16W
R728	VRS-CY1JB102J	J	AA	1 kohm, 1/16W
R729,730	VRS-CY1JB272J	J	AA	2.7 kohms, 1/16W
R753	VRS-CY1JB124J	J	AA	120 kohms, 1/16W
R754	VRS-CY1JB274J	J	AA	270 kohms, 1/16W
R756,757	VRS-CY1JB273J	J	AA	27 kohms, 1/16W
R761,762	VRS-CY1JB362J	J	AA	3.6 kohms, 1/16W
R763,764	VRS-CY1JB820J	J	AA	82 ohms, 1/16W
R765,766	VRS-CY1JB100J	J	AA	10 ohm, 1/16W [MS722/MS722C]
R765,766	VRS-CY1JB270J	J	AA	27 ohms, 1/16W [MS722W/MS721W (S)/MS721W (BL)]
R767,768	VRS-CY1JB102J	J	AA	1 kohm, 1/16W
R769,770	VRS-CY1JB393J	J	AA	39 kohms, 1/16W
R800	VRS-TV2AB561J	J	AA	560 ohms, 1/10W
R801	VRS-CY1JB222D	J	AA	2.2 kohms, 1/16W
R802	VRS-CY1JB472J	J	AA	4.7 kohms, 1/16W
R803	VRS-CY1JB273D	J	AA	27 kohms, 1/16W
R804	VRS-CY1JB681D	J	AA	680 ohms, 1/16W
R805	VRS-CY1JB684D	J	AA	680 kohms, 1/16W
R806	VRS-CY1JB304D	J	AA	300 kohms, 1/16W
R807	VRS-CY1JB104D	J	AA	100 kohm, 1/16W

MD-MS722/C/W/MS721W

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
R808	VRS-CY1JB105D	J	AA	1 Mohm,1/16W
R809	VRS-CY1JB222J	J	AA	2.2 kohms,1/16W
R810	VRS-CY1JB682J	J	AA	6.8 kohms,1/16W
R811	VRS-CY1JB334J	J	AA	330 kohms,1/16W
R812	VRS-CY1JB184J	J	AA	180 kohms,1/16W
R813	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R814	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R815	VRS-CY1JB563D	J	AA	56 kohms,1/16W
R816	VRS-CY1JB243F	J	AA	24 kohms,1/16W
R818,819	VRS-CY1JB184J	J	AA	180 kohms,1/16W
R821	VRS-CY1JB684J	J	AA	680 kohms,1/16W
R822	VRS-CY1JB335J	J	AA	3.3 Mohms,1/16W
R823	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R824	VRS-CY1JB394D	J	AA	390 kohms,1/16W
R826	VRS-CY1JB224D	J	AA	220 kohms,1/16W
R829	VRS-CY1JB153J	J	AA	15 kohms,1/16W
R830	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R831	VRS-CY1JB184D	J	AA	180 kohms,1/16W
R832	VRS-CY1JB224D	J	AA	220 kohms,1/16W
R841	VRS-CY1JB474J	J	AA	470 kohms,1/16W
R842	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R843,844	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R845-847	VRS-CY1JB334J	J	AA	330 kohms,1/16W
R848	VRS-CY1JB105J	J	AA	1 Mohm,1/16W
R849	VRS-CY1JB184J	J	AA	180 kohms,1/16W
R851	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R852	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R853	VRS-CY1JB334D	J	AA	330 kohms,1/16W
R854	VRS-CY1JB225J	J	AA	0.2 Mohms,1/16W
R855	VRS-CY1JB274D	J	AA	270 kohms,1/16W
R857,858	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R859	VRS-CY1JB153J	J	AA	15 kohms,1/16W
R860	VRS-CY1JB333J	J	AA	33 kohms,1/16W
R872	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R891	VRS-CY1JB222J	J	AA	2.2 kohms,1/16W
R892	VRS-CY1JB560J	J	AA	56 ohms,1/16W
R893	VRS-CY1JB102J	J	AA	1 kohm,1/16W
R901,902	VRS-CY1JB1R0J	J	AA	1 ohm,1/16W
R903	VRS-CY1JB331J	J	AA	330 ohms,1/16W
R904	VRS-CY1JB333J	J	AA	33 kohms,1/16W
R905	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R906	VRS-CY1JB274J	J	AA	270 kohms,1/16W
R907	VRS-CY1JB184J	J	AA	180 kohms,1/16W
R908	VRS-CY1JB104J	J	AA	100 kohm,1/16W
R909	VRS-CY1JB103J	J	AA	10 kohm,1/16W
R921	VRS-CY1JB331J	J	AA	330 ohms,1/16W
R922	VRS-CY1JB104J	J	AA	100 kohm,1/16W

OTHER CIRCUITRY PARTS

CN101	QCNCW801XAFZZ	J	AH	Socket,22Pin
CN451	QCNCW804TAFZZ	J	AE	Socket,18Pin
CN482	QCNCW804GAFZZ	J	AD	Socket,7Pin
CN601	QCNCW716RAFZZ	J	AF	Socket,16Pin
△ F800	QFS-L102AAFNO	J	AE	Fuse,100A,63VDC,Tip Type
J701	VHLGP1FB95R-1	J	AP	Jack,OPTICAL/LINE IN
J702	QJAKM0189AFZZ	J	AE	Jack,MIC IN
J703	QJAKM0201AFZZ	J	AH	Jack,Remote Control/Head-phones
J801	QJAKC0139AFZZ	J	AE	DC Jack
M901	RMOTV0510AFZZ	J	AS	Motor Ass'y [Spindle]
M902	RMOTV0511AFZZ	J	AT	Motor Ass'y [Sled]
M903	RMOTV0512AFM1	J	AR	Motor Ass'y [Lift]
SW401	QSW-M0001AWZZ	J	AD	Switch,Push Type [EJECT]
SW402	QSW-S0948AFZZ	J	AC	Switch,Slide Type [HOLD]
SW901	QSW-M0169AFZZ	J	AD	Switch,Push Type [Disc In]
SW902	QSW-M0170AFZZ	J	AD	Switch,Push Type [Disc Protect]

MECHANICAL PARTS

1	NGERH0597AFZZ	J	AC	Wheel,Drive
2	NSFTD0331AFFT	J	AE	Screw,Drive
3	LHLDX3136AFM2	J	AK	Cartridge Holder Ass'y
4	MSPRT1607AFFJ	J	AB	Spring,Cancel Lever
5	MLEVF2598AFFW	J	AD	Lever,Eject
6	LCHSM0941AFM1	J	AT	Main Chassis Ass'y
7	PCUSG0599AFZZ	J	AB	Cushion
8	QPWBH0326AFM1	J	AM	Mechanism Flexible PWB Ass'y
8- 1	—	—	—	Mechanism Flexible PWB (Not Replacement Item)
8- 2(SW901)	QSW-M0169AFZZ	J	AD	Switch,Push Type [Disc In]
8- 3(SW902)	QSW-M0170AFZZ	J	AD	Switch,Push Type [Disc Protect]

↓ 8- 4(PH901)	VHGP1S93K/-1	J	AF	Photo Interrupter,GP1S93K
9	MSPRP0925AFFJ	J	AD	Driver Screw Bracket
11	MSPRP0923AFFJ	J	AD	Plate Spring
12	MSPRP0924AFM1	J	AD	Shutter Spring Ass'y
13	NGERH0603AFZZ	J	AE	Gear,Drive
△ 15	RCTRH8175AF10	J	BM	Optical Pickup Unit
16	MSPRP0922AFFJ	J	AD	Spring,Drive Grip
18	NSFTM0292AFFW	J	AC	Shaft,Guide
20	MSPRT1604AFFJ	J	AB	Spring,Eject Lever
23	QPWBH0327AFZZ	J	AG	Magnetic Head Flexible PWB
25	MLEVF2625AFM1	J	AK	Lift Lever Ass'y
27	MLEVF2626AFFW	J	AD	Lever,Lift Joint
28	MLEVF2627AFFW	J	AE	Lever,Lift
29	MSPRD1360AFFJ	J	AC	Spring,Lift Lever
30	LANGF1588AFFW	J	AD	Bracket,Pickup
32	RCILH0110AFZZ	J	AM	Magnetic Head
502	LX-JZ0154AFZZ	J	AA	Screw,ø1.4×2.8mm
503	LX-BZ0823AFZZ	J	AA	Screw,ø1.4×1.2mm
504	LX-WZ9290AFZZ	J	AA	Washer,ø0.8×ø2.4×0.25mm
505	LX-BZ0800AFZZ	J	AA	Screw,ø1.4×2.5mm
506	XSPSN14P01500	J	AA	Screw,ø1.7×2.5mm
508	LX-BZ0960AFZZ	J	AB	Screw,ø1.4×1.5mm
509	LX-BZ0980AFZZ	J	AB	Screw,ø1.4×2mm
511	LX-BZ0804AFFJ	J	AA	Screw,ø1.4×2.2mm
514	LX-JZ0148AFZZ	J	AA	Screw,ø1.7×3mm
515	LX-WZ9296AFZZ	J	AA	Washer,ø1.5×ø3.5×0.25mm
516	LX-BZ0974AFZZ	J	AB	Screw,ø1.4×5.5mm
517	XAPSF14P01600	J	AA	Screw,ø1.4×1.6mm
518	XWSSD14-05000	J	AA	Spring Washer,ø1.4×0.5mm
M901	RMOTV0510AFZZ	J	AS	Motor Ass'y [Spindle]
M902	RMOTV0511AFZZ	J	AT	Motor Ass'y [Sled]
M903	RMOTV0512AFM1	J	AR	Motor Ass'y [Lift]

CABINET PARTS

201	CCABB2882AF01	J	AT	Front Cabinet Ass'y [MS722/MS722C/MS722W]
201	CCABB2882AF03	J	AT	Front Cabinet Ass'y [MS721W (S)/MS721W (BL)]
201- 1	—	—	—	Front Cabinet (Not Replacement Item)
201- 2	GFTAC3135AFSA	J	AG	Cover,MD
201- 3	LANGZ0335AFFW	J	AB	Bracket,Disc Guide
201- 4	PCUSG0638AFZZ	J	AA	Rubber,Preventive Vibration D
201- 5	PGIDM0256AFSA	J	AB	Guide (Left)
202	CCABC4370AF01	J	AX	Top Cabinet Ass'y [MS722/MS722C/MS722W]
202	CCABC4378AF01	J	AX	Top Cabinet Ass'y [MS721W (S)]
202	CCABC4378AF03	J	AY	Top Cabinet Ass'y [MS721W (BL)]
202- 1	—	—	—	Top Cabinet (Not Replacement Item)
202- 2	LHLDL3061AFSA	J	AE	Holder,Strap
203	GCABA2882AFSA	J	AE	Center Cabinet [MS722/MS722C/MS722W]
203	GCABA2882AFSB	J	AE	Center Cabinet [MS721W (S)/MS721W (BL)]
204	CCABD4385AF01	J	AT	Bottom Cabinet Ass'y [MS722]
204	CCABD4386AF01	J	J	Bottom Cabinet Ass'y [MS722C]
204	CCABD4387AF01	J	J	Bottom Cabinet Ass'y [MS722W]
204	CCABD4389AF01	J	J	Bottom Cabinet Ass'y [MS721W (S)]
204	CCABD4389AF03	J	J	Bottom Cabinet Ass'y [MS721W (BL)]
204- 1	—	—	—	Bottom Cabinet
204- 2	GCOVA2292AFSA	J	AB	Cover,DC Jack
204- 3	JKNBZ2113AFSA	J	AE	Knob,Hold
204- 4	PSHET0401AFZZ	J	AC	Sheet,Insulator,Bottom Cabinet
205	GCOVA2284AFSA	J	AD	Cover,Eject [MS722/MS722C/MS722W]
205	GCOVA2284AFSB	J	AD	Cover,Eject [MS721W (S)/MS721W (BL)]
206	JKNBK0526AFSA	J	AE	Knob,Eject
207	LANGT1953AFFW	J	AC	Bracket,Eject Knob
208	LANGZ0348AFM1	J	AM	Eject Bracket Ass'y
209	PSHET0373AFZZ	J	AC	Sheet
210	PSHEZ0851AFZZ	J	AC	Bracket,Eject Knob
211	LANGK0956AFM1	J	AM	Main Frame Ass'y
212	PCUSG0649AFZZ	J	AB	Cushion Machanism
213	PCUSG0671AFZZ	J	AB	Cushion
214	PSHEZ0966AFZZ	J	AC	Sheet,Insulator Extension Battery Terminal

MD-MS722/C/W/MS721W

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
215	PCUSG0675AFZZ	J	AB	Cushion B
216	PGUMS0729AFZZ	J	AB	Cushion Mechanism A
217	PSHEZ0989AFZZ	J	AB	Sheet,Extension Battery Terminal
218	PCUSG0534AFZZ	J	AC	Rubber,Preventive Vibration
219	QTANZ9162AFFQ	J	AC	Terminal,+,Rechargeable Battery
220	PCUSG0635AFZZ	J	AA	Rubber,Preventive Vibration B
221	QTANZ9163AFFQ	J	AC	Terminal,-,Rechargeable Battery
222	PCUSG0674AFZZ	J	AB	Cushion A [MS722/MS722C/MS722W Only]
223	PCUSG0676AFZZ	J	AB	Cushion C [MS722/MS722C/MS722W Only]
225	PSHEZ0990AFZZ	J	AB	Sheet,Ring [MS722/MS722C/MS722W Only]
228	PFLT-1127AFZZ	J	AA	PU Felt
229	GFTAB1359AFSA	J	AE	Lid,Battery [MS722/MS722C/MS722W/MS721W (S)]
229	GFTAB1359AFSB	J	AE	Lid,Battery [MS721W (BL)]
230	QTANZ9164AFFQ	J	AH	Extension Battery Terminal
231	GCOVH1301AFSA	J	AD	Guide,Disc [MS722/MS722C/MS722W Only]
232	PSHEZ0965AFZZ	J	AC	Sheet,Disc Guide [MS722/MS722C/MS722W Only]
233	GCOVH1302AFZZ	J	AD	Cover,LCD [MS722/MS722C/MS722W Only]
234	HDECQ0580AFSA	J	AK	Decoration Plate [MS722/MS722C/MS722W]
234	HDECQ0583AFSA	J	AH	Decoration Plate [MS721W (S)/MS721W (BL)]
235	HDECQ0578AFSA	J	AK	Decoration Ring A [MS722/MS722C/MS722W Only]
236	HDECQ0579AFSA	J	AF	Decoration Ring B [MS722/MS722C/MS722W Only]
237	JKNBZ2130AFSA	J	AF	Knob,Function A [MS722/MS722C/MS722W]
237	JKNBZ2144AFSA	J	AK	Knob,Function A [MS721W (S)/MS721W (BL)]
238	JKNBZ2131AFSA	J	AF	Knob,Function B [MS722/MS722C/MS722W]
238	JKNBZ2145AFSA	J	AF	Knob,Function B [MS721W (S)/MS721W (BL)]
239	JKNBZ2132AFSA	J	AE	Knob,Function C [MS722/MS722C/MS722W]
239	JKNBZ2146AFSA	J	AF	Knob,Function C [MS721W (S)/MS721W (BL)]
240	JKNBZ2133AFSA	J	AE	Knob,Function D [MS722/MS722C/MS722W Only]
241	JKNBZ2134AFSA	J	AE	Knob,Rec [MS722/MS722C/MS722W]
241	JKNBZ2147AFSA	J	AC	Knob,Rec [MS721W (S)/MS721W (BL)]
242	JKNBZ2135AFSA	J	AK	Knob,Jog [MS722/MS722C/MS722W Only]
243	JKNBZ2136AFSA	J	AE	Knob,FF/FR [MS722/MS722C/MS722W Only]
244	JKNBZ2137AFSA	J	AE	Knob,Play [MS722/MS722C/MS722W Only]
246	PSHEZ0967AFZZ	J	AC	Sheet,Transparent Plate [MS722/MS722C/MS722W]
246	PSHEZ0973AFZZ	J	AC	Sheet,Transparent Plate [MS721W (S)/MS721W (BL)]
248	RUNTK0489AFZZ	J	AU	Key Flexible PWB Ass'y [MS722/MS722C/MS722W]
248	RUNTK0493AFZZ	J	AQ	Key Flexible PWB Ass'y [MS721W (S)/MS721W (BL)]
249	RUNTZ0704AFZZ	J	AY	LCD [MS722/MS722C/MS722W]
249	RUNTZ0705AFZZ	J	AY	LCD [MS721W (S)/MS721W (BL)]

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
251	PSHEZ0994AFZZ	J	AB	Sheet,Switch,B [MS722/MS722C/MS722W Only]
252	PGUMS0730AFZZ	J	AB	Cushion,Mechanism B [MS722/MS722C/MS722W Only]
253	HDECQ0584AFSA	J	AQ	Alumi Decoration Plate [MS721W (S) Only]
253	HDECQ0584AFSB	J	AR	Alumi Decoration Plate [MS721W (BL) Only]
254	LHLDZ1747AFZZ	J	AC	Holder,LCD [MS721W (S)/MS721W (BL) Only]
255	PSHEZ0974AFZZ	J	AD	Sheet,Knob [MS721W (S)/MS721W (BL) Only]
256	PSHEZ0998AFZZ	J	AC	Sheet,Eject Bracket
259	PCUSG0679AFZZ	J	AB	Cushion A [MS721W (S)/MS721W (BL) Only]
260	PCUSG0680AFZZ	J	AB	Cushion B [MS721W (S)/MS721W (BL) Only]
261	PCUSG0681AFZZ	J	AB	Cushion C [MS721W (S)/MS721W (BL) Only]
262	PFLT-1143AFZZ	J	AB	Felt [MS721W (S)/MS721W (BL) Only]
263	PSHEZ0999AFZZ	J	AB	Sheet,LCD Flexible [MS722/MS722C/MS722W Only]
264	PSHEZ1004AFZZ	J	AB	Sheet,Volume Knob [MS721W (S)/MS721W (BL) Only]
265	TLABS0497AFZZ	J	AD	Caution,Laser [MS722C/MS722W/MS721W (S)/MS721W (BL) Only]
266	TLABS0503AFZZ	J	AC	Label,Laser [MS722C/MS722W/MS721W (S)/MS721W (BL) Only]
601	LX-BZ0877AFF3	J	AA	Screw,ø1.4×1.5mm
602	LX-CZ0107AFF3	J	AA	Screw,ø1.2×2.5mm
603	LX-CZ0126AFF3	J	AA	Screw,ø1.4×2mm
604	LX-BZ0805AFFN	J	AB	Screw,ø1.7×2.5mm
605	LX-BZ0822AFFC	J	AC	Screw,ø1.4×2.5mm
606	LX-BZ0967AFFC	J	AB	Screw,ø1.4×2mm
607	LX-BZ0908AFF3	J	AA	Screw,ø1.4×2.0mm

PACKING PARTS [MS722C/W/MS721W ONLY]

SPAKA2679AFZZ	J	AD	Packing Add. [MS722W/MS721W (S)/MS721W (BL)]
SPAKA2704AFZZ	J	AD	Packing Add. [MS722C]
SPAKC6673AFZZ	J		Packing Case [MS722C]
SPAKC6674AFZZ	J	AL	Packing Case [MS722W]
SPAKC6685AFZZ	J	AL	Packing Case [MS721W (S)]
SPAKC6686AFZZ	J	AL	Packing Case [MS721W (BL)]
SPAKZ0465AFZZ	J	AD	Pad,AC Adaptor [MS722W/MS721W (S)/MS721W (BL) Except for Australia/New Zealand]
SPAKZ0475AFZZ	J	AD	Spacer,Operation Manual [MS722W/MS721W (S)/MS721W (BL) for Australia/New Zealand]
SPAKZ0489AFZZ	J		Pad,AC Adaptor [MS722C]
SPAKZ0498AFZZ	J		Packing Add.,Unit
SPAKZ0507AFZZ	J		Pad,AC Adaptor [MS722W/MS721W (S)/MS721W (BL) for Australia/New Zealand]
SPAKZ0509AFZZ	J		Packing Add.,Unit
SSAKP0116AFZZ	J	AD	Paper Bag,Unit

ACCESSORIES

GCASZ0086AFSA	J	AX	Battery Case
PCAPH8107AFZZ	J	AD	Cushion,Headphones [MS722W/MS721W (S)/MS721W (BL)]

MD-MS722/C/W/MS721W

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
	QCNWG0382AFZZ	J	AK	Connecting Cord,RCA Type
	QCNWG0422AFZZ	J	AQ	Connecting Cord,Optical Type
	QPLAGA0250AFZZ	J		Plug,AC Adaptor [MS722W/MS721W (S)/ MS721W (BL)]
△	RADPA3489AFZZ	J	AV	AC Adaptor [MS722/MS722C]
△	RADPA5402AFZZ	J	BF	AC Adaptor [MS722W/MS721W (S)/ MS721W (BL) Except for Taiwan/Australia/New Zealand/ Hong Kong]
△	RADPA5403AFZZ	J	BF	AC Adaptor [MS722W/MS721W (S)/ MS721W (BL) for Taiwan]
△	RADPA6435AFZZ	J	BG	AC Adaptor [MS722W/MS721W (S)/ MS721W (BL) for Australia/New Zealand]
△	RADPA8493AFZZ	J	BH	AC Adaptor [MS722W/MS721W (S)/ MS721W (BL) for Hong Kong]
	RPHOH0176AFZZ	J	AR	Headphones [MS722W/MS721W (S)/ MS721W (BL)]
	RPHOH0185AFZZ	J	AW	Headphones [MS722/MS722C]
	RRMCW0035AFSA	J	BC	Remote Control [MS721W (S)/MS721W (BL)]
	RRMCW0038AFSA	J	BC	Remote Control [MS722/MS722C/MS722W]
	TCAUH0341AFZZ	J	AD	Caution,Headphones
	TCAUZ0450AFZZ	J	AD	Caution Label,Operation Manual [MS722W/MS721W (S)/ MS721W (BL) for Taiwan Only]
	TGANE1220AFZZ	J	AB	Warranty Card [MS722W/MS721W (S)/ MS721W (BL) for Australia/New Zealand]
	TGANE1230AFZZ	J		Warranty Card [MS722W/MS721W (S)/ MS721W (BL) for Philippines]
	TGANZ1096AF01	J		Warranty Card [MS722W for Taiwan]
	TINSE1642AFZZ	J		Operation Manual [MS721W (S)/MS721W (BL) for Australia/New Zealand]
	TINSE1643AFZZ	J	AG	Operation Manual [MS722W for Australia/New Zealand]
	TINSK0369AFZZ	J		Operation Manual [MS722C]
	TINSZ1381AFZZ	J	AG	Operation Manual [MS722]
	TINSZ1382AFZZ	J	AD	Quick Guide [MS722 Only]
	TINSZ1383AFZZ	J	AN	Operation Manual [MS722W Except for Australia/ New Zealand]
	TINSZ1386AFZZ	J	AN	Operation Manual [MS721W (S)/MS721W (BL) Except for Australia/New Zealand]
	TLABG0527AFZZ	J	AC	Label,Hong Kong [MS722W/MS721W (S)/ MS721W (BL) for Hong Kong Only]
	TLABH0699AFZZ	J		Label,Taiwan [MS722W/MS721W (S)/ MS721W (BL) for Taiwan Only]
	TLABM0638AFZZ	J	AD	Label,Specification [MS722W for Taiwan Only]
	TLABR1008AFZZ	J	AC	Label,Bar Code [MS721W (BL) for Central•South America Only]
	TLABR1009AFZZ	J	AC	Label,Bar Code [MS721W (S) for Central•South America Only]
	TLABR1010AFZZ	J	AC	Label,Bar Code [MS722W for Central•South America Only]
	TLABS0478AFZZ	J	AC	Label,CAP [MS722W/MS721W (S)/ MS721W (BL) forSingapore]
	UBAGC0076AFSA	J	AH	Carrying Case
	UBATI0068AFSA	J	BG	Rechargeable,Battery
	UBNDT0083AFSA	J	AG	Strap

NO.	PARTS CODE	★	PRICE RANK	DESCRIPTION
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P.W.B. ASSEMBLY (Not Replacement Item)

PWB-A	DCYO-3088AF93	J	—	Main [MS722/MS722C]
PWB-A	DCYO-3090AF93	J	—	Main [MS722W/MS721W (S)/ MS721W (BL)]

OTHER SERVICE PARTS

UDSKM0001AFZZ	J	AZ		Recording Mini Disc
88GMMD-110	J	BV		High Reflection Disc MMD-110 (TEAC Test MD)
88GMMD-212	J	BU		Low Reflection Disc MMD-212 (TEAC Test MD)

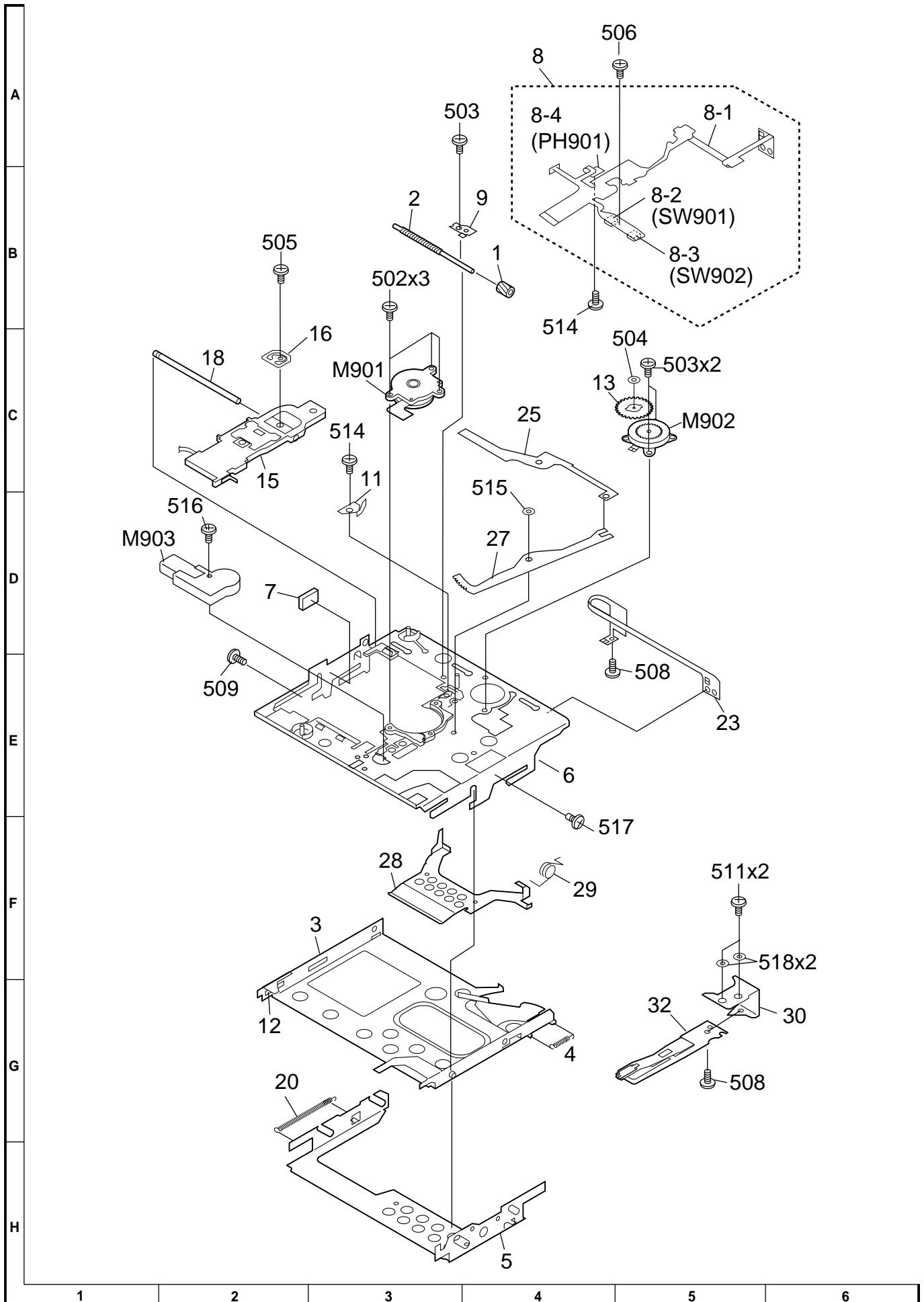


Figure 6 MD MECHANISM EXPLODED VIEW

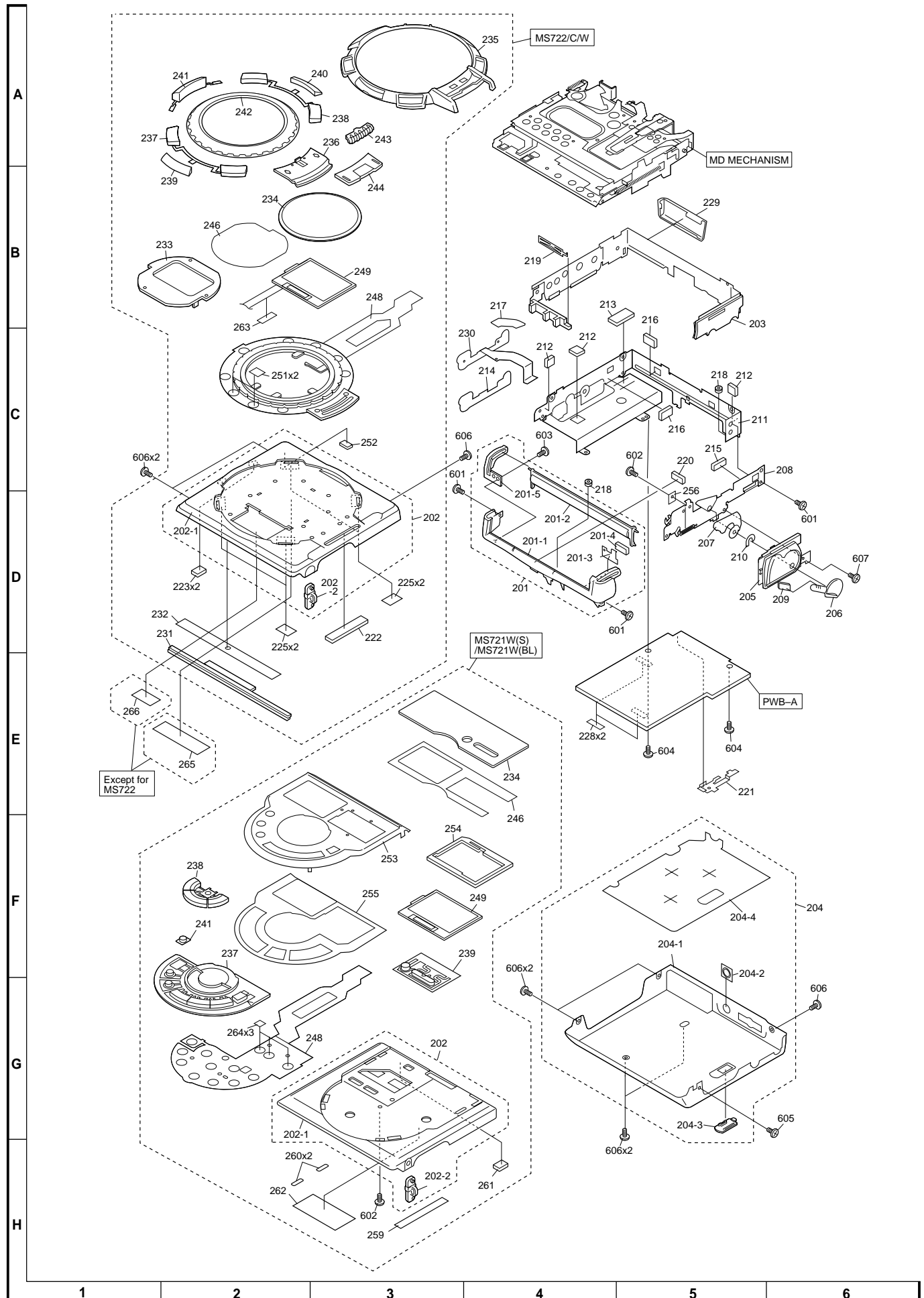
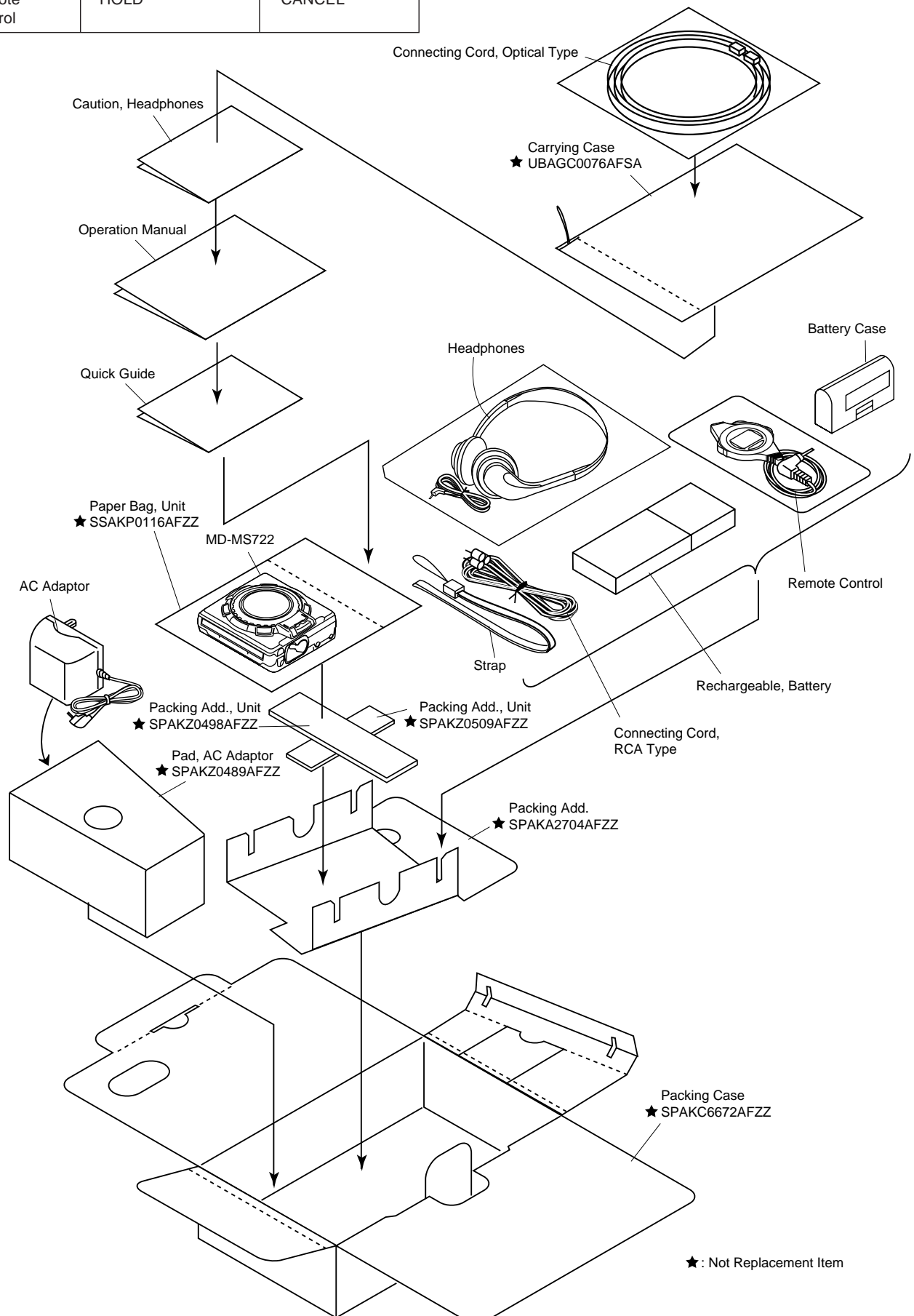


Figure 7 CABINET EXPLODED VIEW

PACKING OF THE SET (MD-MS722 ONLY)

SETTING POSITION OF SWITCHES AND KNOBS

UNIT	HOLD	OFF
Remote Control	HOLD	CANCEL



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